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of THE
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FRONT COVER: David McClintock at his desk taken through the window of his library at Bracken Hill by Pamela Lee.

*Yearbook
of
The Heather Society*

2002



in memoriam
David McClintock

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A rare picture of David McClintock looking directly at the camera as he invariably looked at the ground when a picture was being taken. This picture was taken during the 20th anniversary celebrations of *Gesellschaft der Heidefreunde*, the German Heather Society in 1997.

[Photo by D. J. Small]

David McClintock

No-one personified The Heather Society more than David McClintock. He was nominated as a Vice-president in 1968, acted as Registrar for almost a quarter of a century (1970–1994), fulfilled the distinguished role of President for more than a decade from September 1989 to September 2001, contributed regularly to *Yearbooks* and *Bulletins*, and yet those are merely the public aspects of his tireless work in the cause of heathers, their science and their cultivation.

His contribution to the vitality of this Society during the entire span of its existence is immeasurable, making the task of providing an adequate tribute virtually impossible.

As Major-General P. G. Turpin noted when he introduced him as the Society's fourth President in the 1990 *Yearbook*, David McClintock's knowledge of the European heathers and their cultivars was unrivalled, and surely he is still the only person, as he himself records in this *Yearbook* (pp 15–16), who has seen and collected every species and virtually all subspecies of *Andromeda*, *Bruckenthalia*, *Calluna*, *Daboecia* and *Erica*, native or naturalised in the northern hemisphere. He garnered vast amounts of information about heathers, making a card index of names that was of vital significance for the *International register of heather names*, and his herbarium contains thousands of annotated specimens of heathers of all ranks.

It is ironic that such a vital member was not at the Society's inaugural meeting which was held at the Royal Horticultural Society, Vincent Square, London, on 20 February 1963. In fact, as Daphne Everett recorded in 1988, David 'did not hear of the meeting until Sir John [Charrington] came into his office immediately after it had taken place!' although he and Sir John had discussed the formation of a society to stimulate interest in heathers.

David's enthusiasm for flowering plants hardly knew any bounds, and while heathers are our preoccupation and were one of his, he was also a considerable authority on cultivated hardy bamboos and on the native flora of the Channel Islands especially Guernsey. One of his finest publications was *Pocket guide to wild flowers* (1956), which he wrote with Richard Fitter who characterised his co-author's knowledge of the flora of these islands as 'magisterial and encyclopaedic'. David's vast knowledge is also very evident in his *Companion to flowers* (1966),

where anecdote after anecdote tumbles from the pages, where plants, their biology, history and associations are explained in his characteristic, succinct prose. *Companion to flowers* demonstrates another aspect of his plantsmanship — David did not disregard cultivated plants for to him they were as important and, when studied, as informative as the wild ones.

In heathers, this lack of separation was paramount for a man who was constantly on the look out for new morsels of information. He knew the wild plants and the cultivated plants — he has seen and studied the veritable species in their native haunts and he had also grown and tested the cultivars in his own garden at Platt in Kent. If there was any gap in his grasp of heathers it was regarding the "Capes" for he had not much interest in the southern hemisphere species, wisely, perhaps, leaving those difficult plants to experts who could more easily study them in the wild. In the quest to study the hardy species and their variation patterns he often persuaded members of The Heather Society to accompany him on trips abroad, and he or his companions would report the expeditions' results in *Yearbooks* and *Bulletins*. We recall the three-week journey through Spain, to see the newly-described *Erica andevalensis* in the Rio Odiel valley, and to investigate reports of white-flowered *E. mackaiana* in northern Spain. We succeeded, introducing the former into cultivation, and bringing back the remarkable white-blossomed cultivar of Mackay's heath named 'Shining Light'. The recently registered *E. arborea* 'Spanish Lime' (p. 74) is another product of that trip when, eagle-eyed as always, David would spot white-flowered or golden-foliaged plants in untrodden places. Among the best of his discoveries are *E. erigena* 'Irish Dusk' and 'Irish Salmon', and *E. x stuartii* 'Irish Lemon' and 'Irish Orange', gathered during several of his many trips to Ireland, the land of his antecedents. The splendid cultivar of the Dorset heath that bears his name was collected on a family holiday at Carnac in Brittany — the original of *E. ciliaris* 'David McClintock' was 'inextricably mixed up with a dwarf gorse bush' but cuttings were taken and Aldenham Heather Nurseries introduced it in 1968.

Thus David was often instrumental in the introduction, selection and naming of new cultivars of heathers, although the actual list of those that he himself produced is modest (p. 13). Not only did he bring plants in from the wild, and from gardens where they were accidental seedlings or sports, but he keenly promoted the production of artificial hybrids, and was to give botanical names (p. 14) to all those produced



Fig. 1. *Erica ciliaris* 'David McClintock' (from *Heathers in colour*, Brian & Valerie Proudley).

during the last few decades that have proved garden-worthy.

The vast number of heather cultivars provided a challenge to a person like David who had a "tidy mind" – how should they be classified. In a paper presented to the first international symposium on the taxonomy of cultivated plants, held in Wageningen during August 1985, he urged a harmonisation of the classification of wild and cultivated plants. 'Ideally all cultivars should come under some grade of botanical classification,' he argued. He wanted to see greater precision in classification and in understanding cultivars. To this end, he published names for yellow- or golden-foliaged *forma* in many species, as well as white-flowered ones, as well as for a miscellany of others such as the "starry" *forma* of *E. tetralix*.

David McClintock was neither a botanist nor a horticulturist by training, yet he was greatly respected in British and European botanical and horticultural circles, often providing a vital bridge between these two "communities". He also had the facility to make complicated matters easily accessible to the interested non-specialist. One of his most important publications was *A guide to the naming of plants*, which The Heather Society published in 1969 and

in a revised edition in 1980, a thoughtful, precise explanation of how plants, especially hardy heathers, got their names and the rules applying to both the Latin, botanical names and the "fancy" cultivar names. It was widely read and used in teaching horticultural students, for example at the National Botanic Gardens, Glasnevin, Dublin in the 1980s and early 1990s.

We all will have our particular memories of David McClintock: a stub of a pencil always in his jacket pocket ready to scribble a note in his pocket-book; impatient of loud noises; single-minded and seemingly inexhaustible in the hunt for a plant; meticulous in collecting and recording; generous in sharing information and plants. He was a punctilious correspondent, even if his rapidly typed letters sometimes seemed to have been written entirely in abbreviations, and annotated in his almost indecipherable, hieroglyphic handwriting; even the address on the recycled envelope was reduced to the minimum, presumably to ensure he could answer all his letters quickly.

A proper assessment of David McClintock's contribution to botanical and horticultural knowledge requires many more pages and many more words. It is pleasing to record that in the New Year's Honours List for 2002, David was awarded the MBE for his outstanding work in botany and horticulture.

This issue of the *Yearbook*, the contents of which have been substantially modified because of his death, is The Heather Society's formal tribute to him. We cannot do more than provide a brief epitome of his life and work. He was one of the Society's founding members and maintained until his death, unexpectedly from a heart attack, a very vital influence in its affairs. One of his last actions while President was to promote The Heather Society Award of Honour presented in August 2000 to Kurt Kramer. It is on record in the minutes of the Society's Council that David himself was to have been granted the Award of Honour in 2001 but his failing health and finally his death mean that the honour was never bestowed. He richly deserved this accolade, not just for his long-garnered knowledge but also for his guidance of this Society through four decades.

E. C. Nelson and D. J. Small

David Charles McClintock MBE, VMH, VMM (1913–2001)

Pamela Lee

Vice-President of The Heather Society.

David McClintock, distinguished botanist, horticulturist and writer, died suddenly at his home, Bracken Hill, on Friday 23 November 2001, aged 88.

David's standing was very high among both professional and amateur colleagues in the botanical as well as the horticultural worlds. As we know, he specialised in heathers, and yet was also an authority on bamboos; he held the NCCPG national collection of *Sasa* in his garden. The Royal Horticultural Society presented him in 1981 with The Gold Veitch Memorial Medal and in 1996 with its most prestigious award, The Victoria Medal of Honour, for services over many years. The RHS also found him to be a valued Chairman of the Scientific Committee and called on him 66 times to deputise as Chairman of the Publications Committee. He fulfilled all these tasks with wisdom and impartiality. At various times he was president of five societies including The Heather Society, The Botanical Society of the British Isles and The Wild Flower Society. He was appointed vice-president of several others, notably the International Dendrology Society, and The Linnean Society which presented him with The H. H. Bloomer Award in 1993. He served on the council of The National Trust and was made a Membre d'honneur of the Société Guernesiaise.

His writings were published in 90 different periodicals, and he wrote, or contributed to, no fewer than 36 books relating to wild flowers. He was co-author, with Richard Fitter, of the first comprehensive fully illustrated book on British plants: *The pocket guide to wild flowers* (1956) remains, even today, the favourite handbook of many botanists. He was instrumental in the founding of the periodical *The plantsman* (continued as *The new plantsman*), and *The European garden flora*.

David's memory was legendary and he had instant recall. Once learned, he never forgot the name of a person or of a plant. He worked tirelessly for nearly 70 years to promote an awareness of British wild flowers, teaching from personal experience in the field how to recognize and value them as an integral part of the fast diminishing countryside. In a tribute written half a century ago we read: "A day's botanising with David is a most exciting experience: so strenuous that some special training is advisable! His keenness is infectious, his manners perfect and his kindness is known to all." David had a wide-ranging knowledge and love of natural history which he disseminated with great enthusiasm.

In the 1950s David was largely instrumental in organising, with the gracious permission of Her Majesty The Queen, the first survey of the natural history of the garden at Buckingham Palace. In addition to recording the flora, he brought together a group of naturalists distinguished in various other spheres to complete a comprehensive survey. It was published in 1964 and became a valuable source of information and reference for the increasingly important study of urban wildlife. Recently he has spent a considerable amount of time working with a similar team, on the revision of these records, to identify the changes that had taken place since the Clean Air Act took effect. The new publication, issued a few days after his death, covers all aspects of the varied wildlife of the garden and owes much to his foresight and dedication over many years. He has also researched the fascinating history of the garden and assisted the Head Gardener in the identification and recording of the many rare trees and plants growing there.

David Charles McClintock was born in Newcastle-upon-Tyne on 4 July 1913, the son of an Irish clergyman. His mother was one of the Buxtons of Easneye, at Ware in Hertfordshire. David's interest in wild flowers started when, as a teenager, he was asked to teach three of his young sisters how to recognise them. He was educated at Harrow and Trinity College, Cambridge. The war years were spent in the army, initially with HQ54 Division. He was then posted to the Intelligence Training Centre and finally to BAOR. He left the army with the rank of lieutenant-colonel and joined the Coal Utilisation Council as their Chief Accountant and Administrative Officer. Leaving this organisation in 1973 shortly before it closed down, he turned full-time to his hobbies, to writing and to broadcasting on horticultural and botanical matters.

Not everyone agreed with his strong views but no one doubted his ability. He was a linguist and frequently reviewed books (more than 2,750) in German, Dutch and French, as well as English, and conversed in these languages with other botanists and plantsmen. David had a huge mail daily and generally responded to each letter on the day it arrived. Often specimens would be enclosed for identification or comment which might then require some research and follow-up correspondence. He maintained an extensive herbarium of heathers, bamboos, wild flowers and garden plants (which he has bequeathed to the RHS Gardens, Wisley), and gradually built up an impressive library of more than 5,000 books on his specialist subjects. He was meticulous in ensuring the accuracy of every text he wrote, but he never quite mastered the typewriter! His scripts were inevitably liberally decorated with corrections. But he

persevered, as he knew that very few people could decipher his hand-writing! Another idiosyncrasy was his refusal to use new envelopes: he consistently re-cycled all those that came to him.

David's height and distinctive head of white hair made him easy to spot in a crowd. He would attend the monthly shows at the RHS Halls, renewing his many acquaintances and was a regular visitor to Chelsea and Wisley. He frequently visited The Natural History Museum, the Linnean Society, and the Lindley Library, verifying every last detail that he might still require to complete a paper.

Having no time for television, David relaxed with classical music on the radio and enjoyed going to live chamber music concerts. He disliked politics and advertising of any kind. David and Anne were gracious hosts and loved entertaining, whether a single friend or relative or large groups of people, in particular members of the specialist societies with which he was involved. He was a kindly, wise counsellor and good friend to many. He gave unstintingly of his knowledge and was constantly busy helping a large number of individuals, as well as many eminent societies.

During his lifetime, David visited hundreds of gardens, both public and private, but he was never happier than when in his own, which he was able to enjoy more as he reduced his commitments in his latter years.

David was blessed with good health throughout his life until the last year, when he began to experience great fatigue. He had always driven himself hard and rarely took holidays, unless they were related to botanical excursions or meetings. He travelled extensively in Europe by car visiting like-minded people and every year over a 50-year period he flew to Guernsey, constantly updating the botanical records there. He researched and published the flora of the island in 1975 and later added a supplement. His determination to see unusual plants growing in their natural habitat led him to join a few friends in Sicily as recently as April 1999. In order to get a good look at *Erica sicula* on Monte Cofano, it was necessary to scramble onto a slippery scree. While viewing the heather through binoculars, he lost his balance, fell backwards, and rolled down the steep slope for over 50 metres and lay unconscious. The rescue involved a difficult descent on a stretcher to the waiting ambulance and finally by helicopter to Palermo hospital. He suffered from shock, multiple bruises and abrasions but no bones were broken. The trauma kept him in intensive care for two days and he had 40 stitches in his head. He spent a further eight days in hospital before making a complete recovery.

In 1940 he married Anne Dawson, who died in 1993. He is survived by two sons, two daughters, eight grandchildren and two great-grandchildren.

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David was a prolific author, and a comprehensive catalogue of his publications, including book reviews (more than 2700) and countless unsigned notes, would occupy many pages. In this bibliography, compiled with the assistance of Ron Cleveley and Mike Walpole, those works in which he concentrated on heathers (representatives of *Andromeda*, *Bruckenthalia*, *Calluna*, *Daboecia* and *Erica* (including Cape species) are listed, as far as they can be traced in the principal publications of this society and its "sister" societies in Germany, The Netherlands and North America. Undoubtedly there are omissions, and for those we apologise.

David also contributed to almost every issue of *Yearbook* a list of 'Recent writings on heathers'; those lists comprise an invaluable source of information about heathers, each reference usually accompanied by one of David's pithy comments (e.g. "On *Erica cinerea*, with a ghastly picture of 'Velvet Night'"; "A masterly survey with numerous references to European heathers").

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Index

Andromeda — 10, 152

Bruckenthalia — 174; see also *Erica spiculifolia*

Calluna vulgaris — 145, 152, 161, 174

‘Aureafolia’ — 170

bud-flowering — 179, 181

‘Cuprea’ — 176

‘Darleyensis’ — 61, 92

‘Dunnet Lime’ — 207

‘Elegantissima’ — 210

‘Elegantissima Walter Ingwersen’ — 68

Calluna vulgaris (contd)

‘Emerald Jock’ — 208

‘Kinlochruel’ — 131, 206

‘Mousehole Compact’ — 130

‘Penhale’ — 92

‘Punch’s Dessert’ — 202

‘Rosalind’ — 184

‘Sister Anne Pink’ — 130

‘Visser’s Fancy’ — 191

‘White Lawn’ — 202

- Daboecia azorica* — 19, 57
 cantabrica — 10, 19, 25, 32, 57, 85, 93, 174
 x scotica — 19, 43, 57
- Erica* — 152, 174
 x afroeuropaea — 203
 andevalensis — 100, 104
 anthura — 141; see also *manipuliflora*
 australis — 22
 bocquetii — 139, 148, 151, 188
 carnea — 77, 84, 87, 101, 105, 122, 146, 147, 196
 ciliaris — 17, 70, 82, 102
 cinerea — 67, 73, 76, 86, 95, 192
 x darleyensis — 106
 erigena — 51
 x garforthensis — 209
 x griffithsii — 197
 herbacea — 77, 87, 122; see also *carnea*
 hibernica — 13; see also *erigena*
 x krameri — 196, 200
 mackaiana — 8, 37, 40, 91, 100
 maderensis — 78
 manipuliflora — 126
 mediterranea — 13, 21, 26, 27; see also *erigena*
 x oldenburgensis — 187, 193
 x praegeri — 8; see also *x stuartii*
 scoparia — 61, 134, 149, 159
 sicula — 69, 214, 205
 spiculifolia — 196
 x stuartii — 63, 71
 terminalis — 132

- Erica* (contd)
 tetralix — 8, 70, 83, 108, 118, 185
 vagans — 24, 135, 140, 142, 158
 x watsonii — 70
 x williamsii — 41
- heather names —
 geographical: — 33, 34, 38, 39, 44, 46, 62, 79, 97,
 116, 120, 128, 137, 138, 150, 160, 169
 personal: — 33, 34, 46, 62, 79, 97, 116, 120, 121,
 127, 128, 138, 150, 160, 169
 for Southern African — 121, 127, 137
- Heather Society — 28, 53
- heathers: aberrant — 48
 bibliography — 23, 172
 chromosome numbers — 64, 107
 double-flowered — 7, 37, 49, 85
 fasciated — 94, 109
 hybrids — see also under individual names — 107
 naming — 20, 56, 59, 72, 103
- heathers in Britain — 3, 4, 6, 10, 11, 99
 Crete — 145
 Cyprus — 155
 Europe — 31, 144, 152, 165
 Ireland — 9, 17, 24, 36, 40, 81, 91, 99
 Madeira — 180
 Spain — 89, 100, 104
 Turkey — 143, 148, 162
- heathers with coloured foliage — 129
 with parts in fives or sixes — 58
 with white flowers — 12, 25, 29, 98, 126

HEATHER CULTIVARS ASSOCIATED WITH DAVID MCCLINTOCK

- Calluna vulgaris*
 'Castle of Mey'
 'Dunnet Lime'
 'Grey Carpet'
 'Grey Seedling' (registered 1988, no. 61)
 'L'Ancrese'
 'Lemon Gem'
 'Prizewinner'
 'White Lawn'
 'Winter Sun'
 'Yellow One'

- Daboecia cantabrica*
 'Charles Nelson'
 'Cleggan' (registered 1991, no. 93)

- Erica arborea*
 'Spanish Lime' (registered 2000, no. 164)
- E. carnea*
 'David's Seedling'
 'Lake Garda'
- E. ciliaris*
 'David McClintock'
- E. cinerea*
 'Angarrack'
 'Autumn Pink'
 'Crimson Glow' (registered 1987, no. 53)
 'Guernsey Lime'
 'Guernsey Pink'
 'Guernsey Plum'
 'Guernsey Purple'
 'Jersey Wonder' (registered 1982, no. 22)
 'Next Best'

- E. erigena*
 'Irish Dusk'
 'Irish Salmon'
- E. mackaiana*
 'Donegal'
 'Galia'
 'Shining Light'
- E. manipuliflora*
 'Cascades' ('Waterfall')
- E. scoparia*
 'Madeira Gold'
- E. x stuartii*
 'Irish Lemon'
 'Irish Orange'
 'Nacung'
- E. tetralix*
 'Arriba'
- E. x veitchii*
 'Pink Pepper' (registered 1987, no. 56)
 'Brockhill' (registered 1994, no. 130)

**BOTANICAL NAMES FOR HEATHERS, AND NEW COMBINATIONS,
 PUBLISHED BY DAVID MCCLINTOCK**

Bruckenthalia

- B. spiculifolia* f. *albiflora* D. C. McClintock
 = *Erica spiculifolia* f. *albiflora* (D. C. McClintock)
 E. C. Nelson & D. C. McClintock

Daboecia

- D. azorica* f. *albiflora* D. C. McClintock
- D. cantabrica* subsp. *azorica* (Tutin & E. F. Warburg)
 D. C. McClintock
- D. cantabrica* nothosubsp. *scotica* (D. C. McClintock)
 D. C. McClintock
- D. cantabrica* f. *alba* (Don) D. C. McClintock
- D. cantabrica* f. *blumii* D. C. McClintock
- D. x scotica* D. C. McClintock
 = *D. cantabrica* nothosubsp. *scotica*
 (D. C. McClintock) D. C. McClintock
- D. x scotica* f. *albiflora* D. C. McClintock

Erica

- E. x afroeuropaea* D. C. McClintock
- E. andevalensis* f. *albiflora* D. C. McClintock &
 E. C. Nelson
- E. arborea* f. *aureifolia* D. C. McClintock
- E. carnea* f. *aureifolia* D. C. McClintock
- E. ciliaris* f. *aureifolia* D. C. McClintock
- E. cinerea* var. *kruessmanniana* D. C. McClintock
- E. cinerea* var. *kruessmanniana* subvar. *depauperata*
 D. C. McClintock
- E. cinerea* f. *alba* (Aiton) D. C. McClintock
- E. cinerea* f. *aureifolia* D. C. McClintock
- E. x darleyensis* f. *albiflora* D. C. McClintock
- E. x darleyensis* f. *aureifolia* D. C. McClintock
- E. erigena* f. *alba* (W. J. Bean) D. C. McClintock
- E. erigena* f. *aureifolia* D. C. McClintock
- E. x garforthensis* D. C. McClintock
- E. x griffithsii* D. C. McClintock
- E. x krameri* D. C. McClintock
- E. lusitanica* f. *aureifolia* D. C. McClintock
- E. mackaiana* subsp. *andevalensis* (Cabezudo &
 Riviera) D. C. McClintock & E. C. Nelson
- E. mackaiana* f. *eburnea* E. C. Nelson &
 D. C. McClintock
- E. mackaiana* f. *eglandulosa* D. C. McClintock
- E. manipuliflora* subsp. *anthura* (Link)
- E. manipuliflora* f. *albiflora* D. C. McClintock
- E. multiflora* f. *alba* (Regel) D. C. McClintock
- E. x oldenbergensis* D. C. McClintock
- E. scoparia* subsp. *maderincola* D. C. McClintock
- E. scoparia* subsp. *maderincola* f. *aureifolia*
 D. C. McClintock
- E. spiculifolia* f. *albiflora* (D. C. McClintock)
 E. C. Nelson & D. C. McClintock
- E. tetralix* f. *aureifolia* D. C. McClintock
- E. tetralix* f. *racemosa* D. C. McClintock
- E. tetralix* f. *stellata* D. C. McClintock
- E. umbellata* f. *albiflora* D. C. McClintock
- E. vagans* f. *alba* (G. Sinclair) D. C. McClintock
- E. vagans* f. *aureifolia* D. C. McClintock
- E. vagans* f. *viridula* D. C. McClintock

News of *Erica sicula* in Sicily

† DAVID McCLINTOCK

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Until early 1999 it seems I was the only person who had seen and collected every species and subspecies of *Andromeda*, *Bruckenthalia* (as was), *Calluna*, *Daboecia* and *Erica*, native or naturalised in the northern hemisphere, except two, both forms of the tender *E. sicula*. One was the type from the extreme northwestern corner of Sicily, the other *E. sicula* subsp. *cyrenaica* from Libya.

It is not long ago we were told that the type was extinct, on Monte Cofano (50km north of Trapani) and to have been lost from its other area, the island Marettimo, west of Trapani. In very recent years however, the species was refound on Monte Cofano.

I owe to our member Dr Lupo Osti the news of its rediscovery. He spent a whole day failing to see it, but learnt that Dr Angelo Troia, a lecturer in Palermo University, working also in the neighbouring Botanic Garden, could show him where it was.

So, early in April 1999, they did see it. Lupo had to return home just before our party arrived, but on 16 April Angelo took us to Monte Cofano. He brought with him a young Sicilian botanist, Salvatore Pasta, who also spoke excellent English and became a tower of strength. Angelo had to leave our party at lunch time, but not before he had specially made the very awkward climb to locate the heather and collect specimens for me.

Our party consisted of Lady Glenkinglas, Patrick and Louise Grattan, all old friends, plus the two Sicilians.

Events prevented us getting to Marettimo. Salvatore tells me it is still there but very elusive to find.

Anne Glenkinglas wisely stayed below while the rest very gradually made the arduous ascent, clinging to tufts of grass and any rocks that proved firm. Eventually the tedious effort was rewarded by the sight of a plant 5 metres up the rock face clearly identified through binoculars from neighbouring white-flowered plants. What happened immediately after that is told in the Summer 1999 *Bulletin*.

Salvatore said he had also seen it rather to the north and suspects it might be elsewhere on that massif. Indeed he had not then searched for the actual

type locality on the northwest flank of the mountain, which was elsewhere described as "*prope sacellum* [chapel] *del crocefisso*" A day or two later the Grattans, walking lower down to the north, were delighted to see plenty of the heather in what may have been the type locality. Since then Salvatore has sent me fine specimens from thereabouts. Salvatore has a paper in draft on its ecology. Our thanks to him and Angelo are unstinted.

Hitherto I had seemed to be the only member of The Heather Society to have seen *E. sicula* growing wild. But Charles Nelson saw it in 1996 in southern Turkey, and in 1999, first Lupo saw it in Sicily, then Pamela Lee and Charles Nelson saw it in Cyprus (where I too had collected it).

How to get to see it in Libya?

Based on herbarium specimens, mostly cultivated and of not always certain origin, I suggested the subspecies might be keyed out as

1a	Leaves and corollas glabrous or nearly so	<i>libanotica</i>
1b	Leaves and corollas clearly pubescent	2
2a	Corolla 8–9mm anthers 2.5–3mm	<i>sicula</i>
2b	Corolla 6mm, anthers 1.3–1.8mm	<i>cyrenaica</i>

Does this hold good on fresh specimens?

All the corollas collected in Sicily were white except for one lobe which was pink (it does not show on the dried specimen). Lupo Osti, however, writes that the samples he collected and the pictures he made show the corolla white but pinkish at the tip of the petals; and all the photos I have show pure white corollas. The other specimens in my herbarium have only faded corollas. Yet Fiori noted "Corolla rosea (rr bianca)" while Webb and Rix (*Flora Europaea* 3: 6) had "Corolla white or very pale pink". Which begs the question.

This was drafted two years ago, hoping to be able to make a return, finishing visit. But now I shall never be able to get that far again.

[Editorial note: David sent this note to me in the past summer, and he corrected the proofs. I have made one minor alteration since then. I promised him to append a summary of my own sightings of *E. sicula* in southern Turkey, but that must wait. E. C. Nelson.]

The accidental heather garden

ELLA MAY WULFF

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Only after our new house was under construction in 1993 on a hillside near Philomath, Oregon, USA, did we discover that the soil in the area was pure clay, the kind that when it is wet coats your boots several inches thick and when it is dry will repel a pickaxe. This was not the soil I remembered from 20-odd years earlier, when we had lived in a tiny university-owned house in Corvallis on the floor of the Willamette Valley six miles away. Making a garden there had been pure pleasure, not difficult at all. This stuff sucked. Literally.

Any garden to be created on this hillside was going to need soil amendments in abundance before I could even consider planting anything. This is also deer territory, so a high fence around the garden was imperative. We chose to enclose an area of slope above and behind the house. During the autumn of 1994, we hired a local farmer to till a huge lorry load of Douglas fir bark chips into the soil that would be inside the fence. Then we had another load deposited there in a big pile. I had planned to spread this, underlain with a layer of newspapers, several inches thick over the tilled soil as a weed-preventing mulch until I could plant the garden.

The only thing planted that autumn was a *Prunus yedoensis* 'Akebono' directly in front of the bark pile near the western edge of the future enclosure. Then my life suddenly became much busier than I had anticipated, and the pile of bark never was spread.

The fence was built during the winter of 1994–1995. The “garden” now became a deer-proof holding area for plants that I had boarded with friends during our move and for the plants I was constantly acquiring from nearby nurseries. The unmulched area grew an incredible crop of weeds, and it became easier for me to make a garden around the rest of the house than within the deer fence. The bark pile remained.

In 1996, I attended the North American Heather Society annual conference in Eureka, California. After seeing Jim and Bev Thompson's marvellous heather garden in Manchester, California, and several smaller heather gardens, I succumbed to heather fever and bought one of nearly every cultivar offered at the conference plant sale. They were little guys in 2 ins and 3 23ins plastic pots, inexpensive and easy to carry home in my car, all 48 of them.

There was no way I was going to get soil prepared for a heather garden that fall, so I plunged the little pots into the fir bark pile up to their rims, spaced about nine inches apart. I expected to move them into a permanent home the following summer, or at least the year after that. Meanwhile, the bark would insulate their roots from winter cold and help to keep them from drying out. The cherry tree was now big enough to throw light shade from the south, and the fence would shade them from the intense western summer sun.

That first winter, only three plants died, probably because the bark wasn't quite as high around them as it should have been. The others thrived, and I added a few more locally purchased heathers that I couldn't resist. The garden around the house outside the fence was slowly being planted as I was able to dig in soil amendments foot by agonizing foot, but I was no closer to having a heather garden prepared than I had been in 1996.

The little heathers didn't know that they weren't supposed to grow well confined to nursery pots. They grew very well, indeed, and were soon crowding each other because of the inadequate spacing. Only one was still tiny and looked very unhappy – *Calluna vulgaris* 'Hoyerhagen'. I dug it up, replanted it into a larger pot, and sank it back into the bark pile. It is still not nearly as large as its neighbors, but it is alive and has doubled in size.

Obviously, the heathers (except for *Calluna vulgaris* 'Hoyerhagen') were no longer confined to their pots. They had sent their roots out through the holes in the pots and were romping through the fir bark. The plants were luxuriant and bloomed well, even though they received only morning sunlight. I did get around to pruning them each year except last, but in the bark pile they stayed.

The bark pile had become an accidental heather garden, unplanned but an obviously happy home for its occupants. About the only thought I had given to placing the cultivars was to put the tree heaths in the back row and to group most of the callunas together, without, I might add, any regard for their predicted size or growth habit. After all, this was to be a **temporary** location for them. The only plants that appear to have suffered from this arrangement are the two *Erica mackaiana* cultivars. They are simply not vigorous enough to compete with the species around them. They are much smaller than the others and haven't bloomed for two years.

What is really surprising to me is that the slow growing *Calluna vulgaris* 'Foxii Nana' and 'Nana Compacta' are still alive, even though they are being shaded by their much more vigorous neighbors. 'Nana Compacta' has made a lovely bun, although moving it would be futile, as the lower branches are defoliated from the shading they have received.

In the summer of 1999, I decided to move *Daboecia cantabrica* 'Cinderella' to a spot in full sun near the house in front of a foundation planting of camellias. Because this plant was on a corner of the accidental heather garden, it was easy to dig despite being a large plant with an equally large root system. It survived the transplanting in mid-summer with minimal setback, and that caused only because I forgot to water it for awhile. It has now recovered completely and growing well.

When I finally began serious work on a heather garden in Autumn 2000 (see *Heather news* #93: 14), it made more sense to buy new small plants for the garden or to take cuttings from the plants in the bark pile than to move the existing plants. By then they had intermingled until it was difficult to determine which plant had sprung from which pot, assuming that you could find a pot. Only the tree heaths were easily accessible. Not only were they on the edge of the pile, but their direction of growth was up rather than out. I'd give moving them a try.

The largest was *Erica arborea* 'Estrella Gold', so that was my first victim. At 18ins tall, it would be a handsome specimen plant for the new garden, if I could move it. I began digging as far from the pot as was feasible and soon managed to loosen the roots that fanned out from the bottom of the pot. The main root system went down and down, at least as far down as the plant was tall. I finally got most of it out of the ground. This root was more than half an inch thick and had burst straight **through** the side of the pot, never mind the holes. No wonder the plant was thriving! The old fir bark was obviously the perfect growing medium, acidic and easily penetrable, and I had supplied water during our usual summer droughts (Western Oregon has a cool Mediterranean-type climate).



Fig 1. Left to right, *Calluna vulgaris* 'Beoley Gold', 'Beoley Crimson', 2.5in pot of 'Tib' with 'Dark Star' behind in the accidental heather garden.

Erica arborea 'Estrella Gold' has survived its years of neglect in the bark pile and its rude removal from same, and it now thrives in full sun in the new garden, where the clay soil has been liberally amended with both old fir bark and coarse sand. Its lower branches are sparsely clad because of the crowding in the bark pile, but the plant appears to be healthy and growing.

In Spring 2001, I moved *Erica australis* and *E. erigena* 'Maxima' to the new heather garden. They are not nearly as attractive as the *E. arborea* 'Estrella Gold'. I'll give them a year in their new locations to see if new growth in full sun will repair the damage caused by the overcrowding.

Meanwhile, I have moved only one of the shrub heaths, *Erica carnea* 'Bell's Extra Special' to the new garden. Its fibrous root system, while extensive, was easier to dig than those of the tree heaths. It, too, appears to have adapted to its new home in full sun. I tried to extract some of the other heathers from the pile but thought better of it. They are simply too entangled. Bits of root system from at least four plants were coming out when one was wanted. A recent visitor suggested what is probably the best resolution for this dilemma: leave the plants where they are and take cuttings from them. When it is finally time to plant the Japanesque garden we envision for inside the fence, the old heathers can be discarded.

Until that time arrives, this accidental heather garden is a good source of cut flowers and a curiosity for visitors, who wonder that so many varieties have achieved survival, let alone produced such luxuriant growth and multitude of flowers while still in small pots. Many of the plants are at least 18 inches in diameter, spreading over, under or through their neighbors of the same size.

This summer, I finally paid close attention to cultivar characteristics and came up with some clear favorites. *Calluna vulgaris* 'Lyndon Proudley' is outstanding. Of "normal" heather color and low erect stature, its sheer flower power makes it a winner. It flowered extremely well on lateral branches, and its fragrance was heavenly. *C. vulgaris* 'Fortyniner Gold' produces tall, straight, unbranched spikes of white flowers. Here in the semi-shade, its foliage isn't gold but rather a light green. Even *C. vulgaris* 'Beoley Gold', shorter but also vigorous, isn't gold in this location but is distinctly lighter than its neighbors.

Calluna vulgaris 'Caleb Threlkeld' has spread enormously, pressed flat against the bark and rooting as it spread. A year ago, I lifted a number of rooted branches, severed them from the main plant and potted them up for use in the new garden. The old plant never missed them.

Erica cinerea 'Golden Drop' won my heart the first winter, when its foliage turned flaming red. In order to illustrate this article, I have just dug it up,



Fig. 1 *Erica cinerea* 'Golden Drop' showing root growth through the pot.

disturbing at least three other heathers in the process. Like the others, it had sent roots out through the holes in its three inch pot. I finally had to break the roots off in order to extract 'Golden Drop' from its neighbors without lifting all of them, too. When I cut off the plastic pot, I found a very tightly packed root ball, from which dangled the roots that had escaped through the pot holes, like tentacles trailing from the body of a jellyfish. I have transplanted this two foot-wide erica into the new heather garden, but I've also taken lots of cuttings from it as a reserve, in case the old plant suffered too much root damage to survive the move.

Among the others in the accidental heather garden, *Erica x watsonii* 'Truro', *E. tetralix* 'Daphne Underwood' and *E. ciliaris* 'Mrs C. H. Gill' have developed into beautiful bushy specimens. *E. x stuartii* 'Stuartii' caught my attention for its unusually shaped bitone flowers. For long season of bloom at a time when its dark magenta color is particularly welcome (fortunately not next to the winter foliage of *E. cinerea* 'Golden Drop'), *E. x darleyensis* 'Kramer's Rote' wins the prize. As I write this in mid-October, it has begun to flower and

should continue until April. 'Kramer's Rote' is a plant that gives you your money's worth.

My accidental heather garden demonstrates the old adage that rules are made to be broken. It is a "one-off" garden, one plant of each cultivar (except *Calluna vulgaris* 'Fortyniner Gold', of which there are two). The plants are a jumble of sizes, shapes and colors. They are planted much closer together than any horticulturist would recommend for healthy growth. Yet, with a few exceptions, the plants are thriving and the assorted colors and shapes somehow blend into each other to form a unified whole.

This is not a garden with great visual impact. The intermixture of colors and textures prevents that. It is, however, a strangely satisfying garden: satisfying, perhaps, precisely because it defies all the rules and still persists, a wild tangle of plants united in their will to survive and in the subtle blending of color achieved through the intermingling of the heather branches.

If you long for a heather garden and have neither the patience nor the energy to plan and plant one "properly", find a pile of aged conifer bark, buy all the different cultivars you fancy, and plant them in the bark pile. If you have the courtesy to remove their pots first, so much the better. If you don't, the plants will probably grow, anyway, if they are buried deeply enough and watered well. In a few years, you, too, will have an "accidental" heather garden.

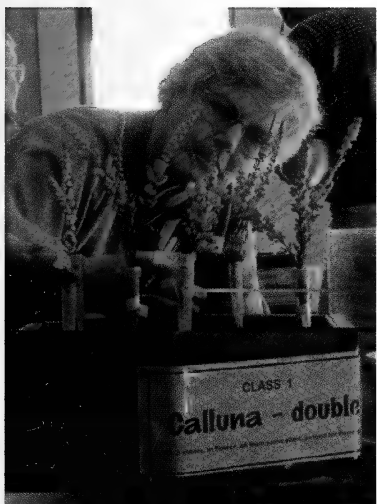
LIST OF SURVIVING CULTIVARS

<i>Calluna vulgaris</i> (25)	<i>Daboecia cantabrica</i> (2)	<i>E. x darleyensis</i> (1)
'Allegro'	'Cinderella'	'Kramer's Rote'
'Beoley Crimson'	'Praegerae'	
'Beoley Gold'		<i>E. erigena</i> (1)
'Blazeaway'	<i>Erica arborea</i> (1)	'Irish Dusk'
'Caleb Threlkeld'	'Estrella Gold'	
'County Wicklow'		<i>E. mackaiana</i> (2)
'Dark Star'	<i>E. australis</i> (1)	'Dr Ronald Gray'
'Finale'		'Plena'
'Fortyniner Gold' (2)	<i>E. ciliaris</i> (1)	
'Foxii Nana'	'Mrs C. H. Gill'	<i>E. x stuartii</i> (1)
'Glenfiddich'		'Stuartii'
'Hamlet Green'	<i>E. carnea</i> (1)	
'Hibernica'	'Bell's Extra Special'	<i>E. tetralix</i> (3)
'Hoyerhagen'		'Daphne Underwood'
'J. H. Hamilton'	<i>E. cinerea</i> (7)	'Gratis'
'Kinlochruel'	'Atrorubens'	'Ken Underwood'
'Lyndon Proudley'	'Eden Valley'	
'Nana Compacta'	'Golden Drop'	<i>E. x watsonii</i> (1)
'Naturpark'	'Golden Hue'	'Truro'
'Schurig's Sensation'	'Rozanne Waterer'	
'Serlei Aurea'	'Velvet Night'	
'Silver Spire'	'Violacea'	
'Tib'		
'Winter Chocolate'		

Tubie test-ing in British Columbia

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What is this woman doing?

At a superficial level, she's peering at sprigs of heather, trying to identify ones which have the largest percentage of florets open yet still fresh, trying not to favour longer racemes with many unopened buds over shorter racemes where all of the densely-packed florets are fully open yet still in prime condition.

But, more importantly, she's about to be confronted by the nature-versus-nurture conundrum. She'll discover differences among samples of the same cultivar when it is raised by different growers, and similarities among different cultivars when they are raised by the same grower. And

she'll appreciate the merits of a superior cultivar when it is raised by an experienced grower.

Ultimately, she'll ask the more successful growers about where their prize-winning plants are situated and when they are mulched and pruned. And she'll begin to introduce some of the prize-winning cultivars into her garden.

For all these benefits, the Vancouver Island Heather Chapter of the North American Heather Society suggests that other heather groups might consider adding Tubie Tests to their range of educational programs.

How Tubie Test-ing got started

It all began in the spring of 1999 because members of our Chapter wanted to encourage local garden clubs and fall fairs to include more classes for heather in their flower shows. But before we could seriously begin nudging other clubs, our Chapter felt that it needed to know a bit more about how heather is judged. A three-person working group was appointed to research the issue.

What are we trying to establish standards for? was the question agonized over at the group's first meeting in June 1999. Were we interested in setting standards for an *arrangement*? a *bouquet*? a *whole plant*? or a *single stem*? At the conclusion of that meeting we divided among ourselves the "homework" assignment of searching our Chapter's complete set of the *Yearbooks* and *Bulletins* issued by The Heather Society (THS) for information on the heather categories and standards used for judging winter and summer shows staged by the Royal Horticultural Society (RHS) and the competitions staged by THS's regional groups. (We had already failed to discover any pertinent information in *Heather news*, issued by the North American Heather Society (NAHS), or in the revised edition of *Judging standards*, just published by the British Columbia Council of Garden Clubs.)

Gleanings from readings

From THS's *Yearbooks* and *Bulletins* we discovered much. It was interesting to learn, from the 1963 *Yearbook*, that as a newly-founded organization, THS proposed to stimulate interest in heathers by arranging "displays and competitions at RHS and local shows." (As noted our Chapter was motivated by a similar goal when it embarked on the odyssey leading to its Tubie Tests.)

We also learned that RHS's competitive classes for heather usually called for *pots* of plants grown in the open or *vases* of material from a single species or cultivar. Competitions organized by THS's regional groups generally were somewhat less daunting. For example, the table shows organized by the South West Group always included the same two classes: a vase or bowl of heathers in bloom, and a vase or bowl of heathers shown for foliage effect. Comparable categories were adopted by the Southern Group when it began holding competitions in 1991.

The March and August competitions organized by the Midlands Group contained four specialized classes as well as one for an arrangement of heathers in a basket. Specialized classes for the March competition included: *Erica carnea* in flower; *Erica* hybrid in flower; heather to be judged for foliage effect; and, tree heath in flower. For the August competition, they were: any *Erica cinerea* in flower – in an Oasis block; any *Erica vagans* in flower – in an Oasis block; any *Calluna* in flower – in an Oasis block; and, any *Calluna* for foliage effect – in an Oasis block.

From what we could discern, most of the competitive classes mentioned above were adjudicated by qualified judges or experienced heather growers. Only in the South West Group were the entries judged through the popular vote of those in attendance.

The practical aspects of showing heather were addressed only in the 1975 *Yearbook* where an article by Terry Underhill advises, from a judge's perspective, how best to select and prepare entries for heather competitions. (An expansion of this information appears in Underhill (1990).) No other information on judging standards was gleaned from the *Yearbooks* or *Bulletins*. (Several months later, through personal communications, we were able to obtain a list of RHS's judging guidelines for meritorious and defective qualities of entries in heather competitions.)

The judging standards working group met again in August 1999 to share findings and consider future activities. It decided to report progress to the next meeting by "judging" a few stems of flowering heather using the information from Underhill's article. This report was sufficiently well-received that a "trial-run parlour show" was scheduled for the following spring.

Trial-Run Parlour Show

Despite its grandiose title, our original parlour show was aptly named because our small group rotated its meetings through the living rooms of its members. Thus, of necessity, the Trial-Run Parlour Show, held in March 2000, adopted a small-scale, easily staged, participatory approach.

Small Scale. Beginning as we did in a crowded living room with the top of a card table serving as a staging area, we were forced to "think small." We limited the size of exhibits to three stems of a heath or heather, a "stem" being defined as a season's growth above the last natural branching or last pruning cut. For containers, we used tubies, a "tubie" being a plastic test-tube size cylinder with a pointed base and one-holed cap used by florists for holding water for a single floral stem – but no water fills our tubies exhibits because, fortunately, heathers remain fresh without it. To stabilize the tubies, we used low flat cartons, such as shoe boxes, with holes punched into their lids. For judging purposes, a unique number was permanently affixed to each tubie.

Easily Staged. Set-up was quick and simple. The hostess set up a card table, and the organizers brought several shoe boxes (one for each competition class) with perforated lids, one containing numbered tubies, another with writing materials (pens, pencils), labels, judging slips, and tally worksheets. Set-up was complete when the contents of the boxes were spread on the card table and the lids replaced .



Participatory. So that all members, experienced growers and novice enthusiasts alike, would feel confident in selecting heather for exhibition and in evaluating the exhibits, we prepared a one-page Show Announcement. This announcement, distributed about a month before the event, described the competition classes, entry procedures, and judging criteria (as gleaned from our readings and personal communications). Thus, when selecting entries for a tubie test, an exhibitor could wander through his or her garden, judging criteria in hand, to identify those stems that best corresponded to “meritorious” criteria and avoided “defective” criteria. When organizing their exhibits at the meeting, exhibitors were encouraged to write the name of each cultivar on a removable label and then affix the label to the tubie holding that cultivar. The exhibitor’s own name was not associated with the entry, however, so that a non-competitive environment would be maintained.

Active participation continued into the judging phase when all in attendance, usually in spontaneously-formed dyads or triads, objectively evaluated the entries using the judging criteria on the Show Announcement. Informal conversations within these groupings helped members compare the quality of entries and learn more about the various cultivars being exhibited. When judging was complete, the meeting continued with other business while several volunteers quietly used preprinted tally forms to record the judging slips and total the results. Near the end of the program, results were announced and a short discussion ensued.

Guidelines for Staging a Tubie Test

Since conducting the Trial-Run Parlour Show in March 2000, our Chapter has held four more shows. During that interval, as membership increased so that we were forced to move our meetings to a small community hall. After this move, fearful that the term “Parlour Show” might be interpreted as a formal competition rather than an informal close-up study of heather, we began using the term “Tubie Tests” to refer to our periodic table-top scrutiny sessions. We recommend Tubie Tests as an enjoyable way to study heather “close up” and would like to share our current approach to organizing this activity.

Issuing the Show Announcement. To be most useful, a Tubie Test should be scheduled for a time when most exhibitors will have access to their best material; in our growing area near the eastern coast of Vancouver Island, we find March and September to be ideal. Because we encourage all members currently growing heathers to participate in the Tubie Tests, we issue a “full disclosure” announcement well in advance of the event which describes the time and place for the Tubie Test, the competition classes, entry procedures,

and judging criteria. While each organization might need to adjust this announcement to reflect local situations, we have found the following competition classes, entry procedures and judging criteria to be understandable and adequate.

Competition Classes. The content of the competitive classes should reflect the range of species and hybrids most prevalent in members' gardens; the number of classes scheduled will reflect the estimated number of exhibits, the space available for set-up, and program time available for judging activities. Our Chapter has found the following three classes adequately accommodate the heathers available in our members' gardens:

March Tubie Test

CLASS 1: Any *Erica carnea*, in flower, one to three stems, all from the same plant, judged for flowers

CLASS 2: Any *Erica* x *darleyensis*, in flower, one to three stems, all from the same plant, judged for flowers

CLASS 3: Any heath or heather, non-flowering, one to three stems, all from the same plant, judged for foliage effect

September Tubie Test

CLASS 1: Any double-flowered *Calluna*, in flower, one to three stems, all from the same plant, judged for flowers

CLASS 2: Any single-flowered *Calluna*, in flower, one to three stems, all from the same plant, judged for flowers

CLASS 3: Any *Erica* or *Daboecia*, in flower, one to three stems, all from the same plant, judged for flowers.

Entry procedures. The following entry procedures mean that the only exhibitor pre-meeting activity is gathering his or her entries. Everything else for staging an entry is provided by the organizers.

- There are no limits on the number of entries for each class.
- Containers will be provided.
- Labels for affixing cultivar name to container will be provided.
- Judging will be by all present at the meeting.

Judging criteria. We've combined the judging guidelines appearing in RHS's *Horticultural show handbook* (obtained by personal communication from an English heather grower) and the award system published in *Heaths and heathers* (Underhill, 1990: 316). As a result, the judging criteria used are as follows:

- **MERITORIOUS:** Good condition; long, straight spikes of evenly spaced florets or large umbels with florets symmetrically arranged; few unopened buds; no faded florets; corollas undamaged; foliage clean, bright-coloured and healthy.
- **DEFECTIVE:** Unsatisfactory condition; spikes that are short, crooked or uneven, or thinly or irregularly furnished with flowers; buds not yet open; florets fading or turning brown; corollas pierced by insects; foliage that is dull, withered or unhealthy.
- **POINTS:** Condition, 6 points; spikes, 6 points; colour, 4 points; uniformity, 4 points; total points, 20.

Setting up the meeting room. It is ideal to have a separate table/work area for each Class. The base for holding the exhibits should be easily accessible and clearly labelled with the class number and description (it's amazing how easily entries end up in the wrong category!). All the necessary supplies (tubies, labels, judging slips, pens/pencils) for that Class should be in the designated area.

● **Tubies.** We continue to use numbered tubies. The hole in the rubber cap is sufficiently large to accept two or three sturdy stems of heather yet pliable enough to permit a motivated exhibitor to do some arranging of the spikes.

● **Base for holding tubies.** We currently use upturned hexagonal-shaped wooden planter boxes, with drilled holes in their former bottom, as bases for holding the tubies. It is ideal to have a separate base for each Class so that the exhibitors have sufficient work space for organizing their entries. It also is advisable to prominently label and colour-code each base so that exhibitors will be more likely to get their exhibits into the correct Class.

● **Removable labels for affixing cultivar name to tubie.** Exhibitors can use small labels to identify the cultivar name for each exhibit. In our early shows we let exhibitors place the cultivar name on a piece of paper and lay it on the cardboard base near the location of the tubie. Over time, we realized that it was better to attach the label to the tubie so that, if the tubie was moved, the name would stay with it. (The downside of affixing the label to the tubie rather than laying a piece of paper on the platform holding the tubie is a longer, slower post-show clean-up - even "removable" labels take a long time to remove!) During the judging phase, if entries are clearly labelled, the evaluators can learn cultivar names, check the *Handy guide* for cultivar characteristics, and compare different samples from the same cultivar — all good learning experiences.

● **Judging Slips for each Class.** Each Judging Slip should be pre-printed with a description of the Class being judged and have designated spaces for

recording the tubie numbers associated with the best, second-best and third-best entries. The Judging Slips for a particular Class should be the same colour as the label on the base holding the entries; the coordination of colour will increase the likelihood that, within each Class, the correct Judging Slip is used for judging the entries. Enough Judging Slips should be prepared so that there will be one for each person in attendance for each of the Classes.

● **Tally Worksheet for Enumerators.** It took several shows before we recognized the need for a formal Tally Worksheet. The one we developed has four columns so that a tubie number (and cultivar name, if available) can be written in the left-hand column and first-, second-, and third-place votes can be tallied in the second, third, and fourth columns respectively. It then is relatively simple to add across the rows in order to identify the top three vote-getters. The Tally Worksheet not only simplifies the task of tabulating the Judging Slips, but also generates a lasting record of the results.

● **Concluding a Tubie Test.** We must admit that there never seems to be enough time in our meeting to adequately discuss the judging results and, more importantly, consider their implications for the selection, care, and maintenance of heathers in the garden. We can attest that individual learning has occurred but, unfortunately, not been shared generally. We offer no solution to this problem as yet.

<i>Class Description</i>	<i>First</i>	<i>Second</i>	<i>Third</i>
MARCH 1, 2000			
Class 1 – 1-3 stems, same plant, in flower	<i>E.x d.</i> 'Kramer's Rote'	<i>E.c.</i> 'King George'	<i>E.x d.</i> 'Kramer's Rote'
Class 2 – 1-3 stems, same plant, foliage effect	<i>C.v.</i> 'Robt Chapman'	<i>C.v.</i> 'Beoley Gold'	<i>E.cin.</i> 'Golden Drop'
SEPTEMBER 6, 2000			
Class 1 – <i>Calluna</i> , double, 1-3 stems, same plant, in flower	<i>C.v.</i> 'Kinlochruel'	<i>C.v.</i> 'Mick Jamieson'	<i>C.v.</i> 'Elsie Purnell'
Class 2 – <i>Calluna</i> , single, 1-3 stems, same plant, in flower	<i>C.v.</i> 'Aberdeen'	<i>C.v.</i> 'White Lawn'	<i>C.v.</i> 'Allegro'
Class 3 – Any <i>Erica/Daboecia</i> , 1-3 stems, same plant, flower	<i>E.v.</i> 'Mrs D.F. Maxwell'	<i>E.x watsonii</i> 'Truro'	<i>E.cil.</i> 'Corfe Castle'
OCTOBER 4, 2000			
Class 1 – <i>Calluna</i> , double, 1-3 stems, same plant, in flower	<i>C.v.</i> 'Elsie Purnell'	<i>C.v.</i> 'H.E. Beale'	<i>C.v.</i> 'Jimmy Dyce'
Class 2 – <i>Calluna</i> , single, 1-3 stems, same plant, in flower	<i>C.v.</i> 'Corbett's Red'	<i>C.v.</i> 'Marleen'	<i>C.v.</i> 'Olive Turner'
MARCH 7, 2001			
Class 1 – <i>Erica</i> <i>camea</i> , 1-3 stems, same plant, in flower	<i>E.c.</i> 'Vivelli'	<i>E.c.</i> 'Springwood Wh'	<i>E.c.</i> 'Golden Starlet'
Class 2 – <i>E.x darleyensis</i> , 1-3 stems, same plant, in flower	(disqualified) ¹	<i>E.x d.</i> 'Kramer's Rote'	<i>E.x d.</i> 'Kramer's Rote'
Class 3 – Any heather, 1-3 stems, same plant, foliage effect	<i>C.v.</i> 'Firefly'	<i>E.cin.</i> 'Golden Drop'	<i>C.v.</i> 'Blazeaway'
OCTOBER 3, 2001			
Class 1 – <i>Calluna</i> , double, 1-3 stems, same plant, in flower	<i>C.v.</i> 'H.E. Beale'	<i>C.v.</i> 'Annemarie'	<i>C.v.</i> 'Peter Sparkes'
Class 2 – <i>Calluna</i> , single, 1-3 stems, same plant, in flower	<i>C.v.</i> 'Aberdeen'	<i>C.v.</i> 'Foxii Floribunda'	<i>C.v.</i> 'Marleen'
Class 3 – Any <i>Erica/Daboecia</i> , 1-3 stems, same plant, flower	<i>E.x wat.</i> 'Truro'	<i>E.cil.</i> 'Mawana'	<i>E.tet.</i> 'Hookstone Pink'

¹ First place was won by *E.camea* 'Springwood Pink' — unfortunately, it was disqualified because it had been entered in the wrong Class

Table 1. Winners of the Tubie Tests

Results and Reactions

The results of our first five Tubie Tests (see chart) reveal the range of heath and heather cultivars that flourish near the coastal areas of southern British Columbia. Interestingly, 15 of the 29 cultivars selected by our amateur judges also hold the Award of Garden Merit which is conferred by RHS after extensive garden trials. Sixteen of the 29 also appear on the “Elegant Eighty” list prepared by David Wilson, the heather guru of the Fraser Valley, as representing the range of cultivars that flourish in the southwest corner of Canada. Twelve of the 29 are present on both lists. So much for the statistics!

Now, we paraphrase a few of the comments from members of our Chapter. Participants liked the small scale of the exhibits because “the brain can’t take it all in at once,” and the criteria-based judging because it offered a chance to look closely and absorb and “to identify what’s what and who’s who.” Although one individual found the Tubie Tests “a bit intimidating because my heathers aren’t like that,” she liked being able to “see how a heather was supposed to look.” The observations of one participant changed her approach to pruning, from that of “hands off” to a carefully selective removal of spent inflorescences at their branching point so that young basal shoots would produce long straight flowering stems.

Much of the post-judging discussion related to the growing conditions of the plants producing prize-winning inflorescences. One participant summarized the impact of the Tubie Tests by saying that “the benefits of conducting these tests is increasing members’ knowledge of different species, and the best locations and conditions for growing.”

It should be evident that Tubie Test-ing has increased our Chapter’s awareness of the nature-versus-nurture aspect of raising healthy heathers. We invite all heather enthusiasts to systematically scrutinize heather at the table-top level – either at the kitchen table or as a participant in a Tubie Test.

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Acknowledgements

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A new rock-loving species of *Erica* from the eastern Swartberg, South Africa

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Fig. 1. *Erica jugicola*. Close-up of flowers.

Most species of *Erica* are erect, single-stemmed, bushy shrublets or shrubs growing in open sandy/stony or peaty ground. In South Africa they can also grow in two very different habitats – in seeps and marshes or on cliffs and open rocks. This new species falls into the latter group since it grows mainly on rock ledges where it forms large dense cushions or mats sprawling over steep rock faces.

Erica jugicola occurs on the summit ridges of the Great Swartberg range, a long range of mountains forming the northern border of the Little Karoo,

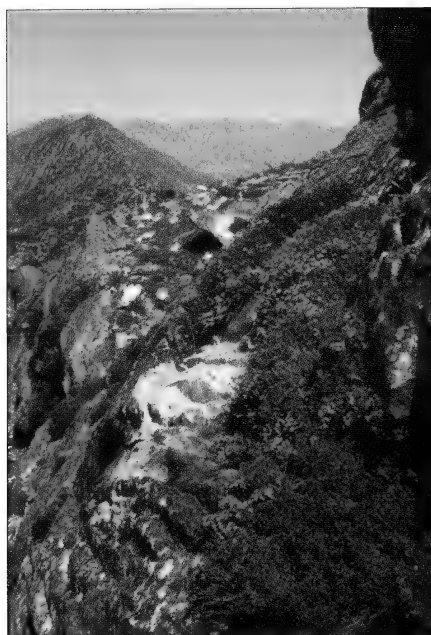


Fig. 2 (left). *Erica jugicola*. Several plants forming cushions on the south-facing slopes of Blesberg looking westwards with *E. lignosa* (pink smaller flowers) in the lower foreground.

Fig. 3. (right). *E. jugicola* growing from a rock crevice.

hence the name, *jugum* (= mountain ridge or height; also a yoke) and *-colus* (= inhabiting) (Fig. 2). It is common on the crest of the ridge around Blesberg where it grows on the southern side on the steep, dipping strata of sandstone. The habitat at 2000m above sea level is relatively cool compared to the dry summer heat of the lowlands. The clouds derived from the southeast trade-winds that can sometimes cover the summits during the hot Summer months produce a cool and moist environment. In Winter the environment is much harsher with strong winds and rain and frequent falls of snow.

The plants can form large mats or cushions to 600mm across and, when in full flower, provide a fine show (Fig. 1). When collecting the type material we were pleased to find the suspected pollinating agent hard at work – large long-tongued flies hovering around the flowers like hummingbirds. They were also seen visiting other ericas in the area such as the very similar *E. lignosa* H. A. Baker and *E. albens* L.

Erica jugicola is most like a group of species which share a similar indumentum on the stems, leaves and flowers – *Erica lignosa*, 41 *E. valida* H. A. Baker, and *E. oresigena* Bolus. The last species grows only in the Cold Bokkeveld and Cederberg mountains several hundred kilometres to the west whilst *E. lignosa* grows sympatrically with the new species and *E. valida* occurs on the nearby Kammanassie Mountains. However, they all differ from it in their 4-nate leaves (not 3-nate) and the structure of the seeds.

In *E. jugicola* the seeds are distinctive for their many faceted shape which is rare in the genus. The testa cells are elongate, mostly smooth walled and have no pits. Most species of *Erica* have rounded, ovoid to ellipsoid seeds which are distinctly alveolate with the testa cells subequal in shape with jigsawed anticlinal walls and very pitted inner periclinal walls.

In *E. jugicola* the ovary is apically rounded and glabrous whereas in the other species it is emarginate and in *E. lignosa* and *E. valida* puberulous to shortly villous. Both of the latter species have similar anthers but with much shorter, broader appendages. In *E. valida* the anther pores are relatively longer. *E. valida* has almost equally sized flowers whereas those of *E. lignosa* are much smaller (± 5 mm long) and urceolate.

Erica lignosa is identical in habit and habitat preferences to *E. jugicola*. It also forms compact mats hanging down from rock ledges and in the Blesberg area in a few instances admixed (Fig. 2). No signs of any hybrids were noted. Plants we have seen of *E. valida* were erect and rounded up to 300 mm tall growing on rocky ledges or outcrops or slightly taller in the ground in the lee of large rocks. The habit of *E. oresigena* is very unlike the other species being a large bushy shrub up to 1.5 m tall growing in open rocky ground.

Erica jugicola **E. G. H. Oliver & I. M. Oliver, sp. nov.**

Habitus tegetiformis vel pulvinatus, folia quarterna, antherae oblongae calcaribus longis angustis poro parvo, semina superficiebus pluribus cellulis elongatis angustis sine poris. Figurae 4 & 5.

TYPE: SOUTH AFRICA, Western Cape, 3322BC, Oudtshoorn Dist., Blesberg, 2000 m, 6 January 2001, E.G.H. & I.M. Oliver 11762 (NBG, holotype; BOL, BM, K, NY, PRE).

Shrubs. compact, 300–(400) mm tall, often densely matted cushion or sprawling mat up to 600 mm across. *Branches:* old main branches creeping and spreading along ground or over rock faces, new main branches erect 100–300 mm long and terminating in a florescence, occasional very short secondary branches 1–3 mm long terminating in a florescence; stems puberulous with a few retrorse long gland-tipped hairs

admixed, internodes very short. *Leaves* 3-nate, imbricate, subspreading, oblong to elliptic, rounded adaxially and abaxially, (3-)5 x 1.0-1.3mm, sparsely puberulous when young with some longer gland-tipped hairs abaxially, margins rounded, ciliate with a few long gland-tipped hairs, sulcus narrow, closed at base; petiole 1.7mm long, puberulous. *Inflorescence*: flowers 3 in 1 whorl at ends of main and secondary branches; pedicel 6-10mm long, dark red, puberulous and with spreading long sticky red gland-tipped hairs up to 0.9 mm long admixed; bract partially recaulescent $\frac{1}{8}$ - $\frac{1}{5}$ way up pedicel, narrowly oblong, 2.5-3.0 x 0.7mm, pink with green apex, puberulous, ciliate with long sticky red gland-tipped hairs, sulcus narrow $\frac{1}{3}$ of bract; bracteoles 2, $\frac{1}{3}$ - $\frac{2}{3}$ way up pedicel, otherwise same as bract. *Calyx* 4-partite, oblong to narrowly elliptic, $\pm 3.8 \times 1.0$ mm, puberulous and with a few long red gland-tipped hairs abaxially and on margins, green to red with apex green, sulcus narrow, $\frac{1}{3}$ length of sepal. *Corolla* 4-lobed, narrowly ovoid-urceolate, 7-13 x 3-4mm, glabrous or occasionally with a few scattered hairs, pink; lobes erect to slightly spreading, rounded, entire, $\pm 1 \times 2$ mm. *Stamens* 8, included or manifest, free; filaments linear, slightly bent at apex; anthers bilobed, dorsifixed near base, appendiculate, thecae erect, oblong, (1.7-)2.0 x 0.5mm in side view, dark brown, aculeate at base; appendages linear, ± 1.4 mm long sometimes broader towards theca, aculeate, pore small, $\pm \frac{1}{6}$ as long as theca; pollen in tetrads. *Ovary* 4-locular, obovoid, $\pm 2.5 \times 1.3$ mm, apically rounded, glabrous, green, with well developed nectaries around the base; ovules 30-40 per locule spreading to pendulous on placenta in upper half; style just exerted, terete, straight, glabrous, white; stigma truncate to slightly capitellate, dark red. *Fruit* a woody dehiscent capsule, valves splitting to base at 45° angle, septa equally on valves and columella; seeds irregular in outline with a several faceted surface, $\pm 0.9 \times 0.4$ mm, orange to dark brown; testa cells very slightly sunken, $\pm 50-100 \times 12-15$ mm, anticlinal walls thin, shallowly undulate to straight, periclinal walls thin with no pits visible. Figures 4 & 5.

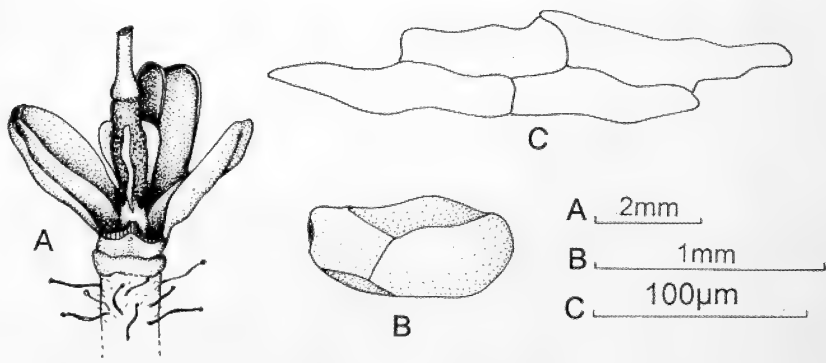


Fig. 4. *Erica jugicola*. A, open dehiscent capsule with one valve removed; B, seed; C, testa cells. All drawn from Oliver 11543.

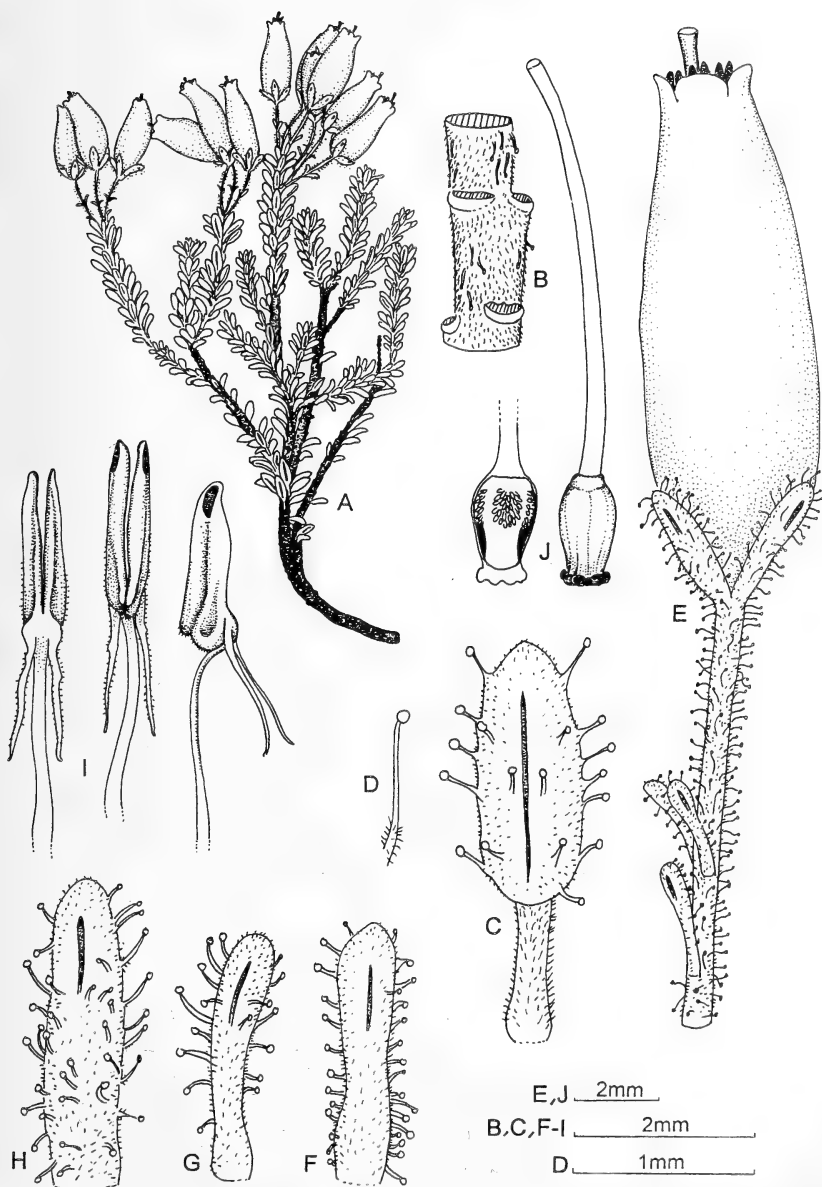


Fig. 5. *Erica jugicola*. A, flowering branch, natural size; B, stem; C, leaf; D, long hair from stem and pedicel; E, flower; F, bract; G, bracteole; H, sepal; I, anther, back, front & side views; J, gynoeceium with, left, ovary opened laterally. All drawn from the type collection, *Oliver 11762*.
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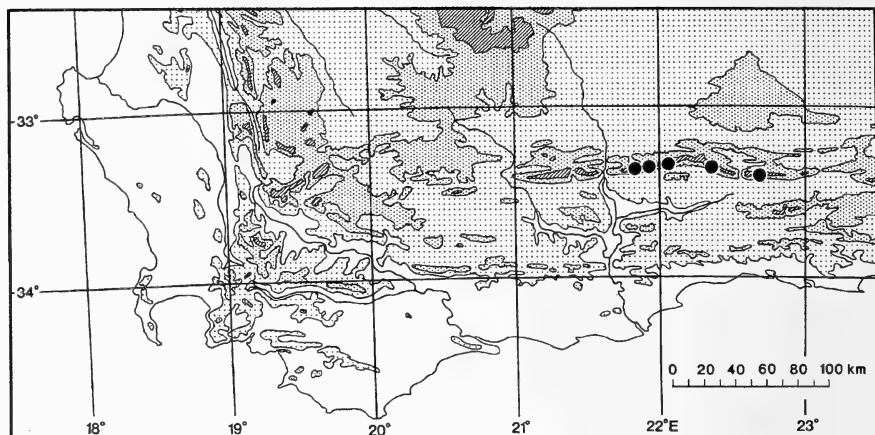


Fig. 6. Known distribution of *Erica jugicola*.

PARATYPES: WESTERN CAPE. — 3321: Swartberg between Waboomsberg and Kangoberg, 6000ft [1830m], (–BD), 3 December 1969, *Oliver 3048*(NBG); Swartberg, summit ridges between Kliphuisvlei & Plaatsberg, 6000–6500ft [1830–1980m], (–BD), 15 January 1954, *Taylor 1091A* (BOL). — 3322: Swartberg Pass, 6000ft [1830m], (–AC), 24 January 1941, *Esterhuysen 4562*(BOL); *ibid.*, Janaury 1935, *Stokoe 6858*(BOL, NBG); *ibid.*, January 1947, *Stokoe SAM62510*(SAM); *ibid.*, 6000 ft [1830m], December 1934, *Thorne SAM50003*(SAM) as *Stokoe SAM50003*(BOL); Spitzkop, 6500ft [1980m], (–AD), 25 January 1953, *Taylor 650*(NBG, PRE); *ibid.*, summit, February 1932, *Thorne SAM50186* (BOL, SAM); Blesberg, main peak in ridge E of, 6600ft [2010m], (–BC), 6 January 1975, *Oliver 5623*(K, NBG, NY, MO, P, PRE, W); *ibid.*, neck just E of, 2000m, 13 July 2000 (fruiting), *E. G. H. & I. M. Oliver 11543*(NBG); *ibid.*, 6300ft [1920m], 12 January 1981, *Vlok 104*(NBG); *ibid.*, 6750ft [2060m], 18 December 1985, *Vlok 1320* (NBG, PRE). Figure 6.

The hardiness of some of the less familiar heathers in the English Midlands

ALLEN HALL

10 Upper Green, Nanpantan, LOUGHBOROUGH, LE11 3SG.

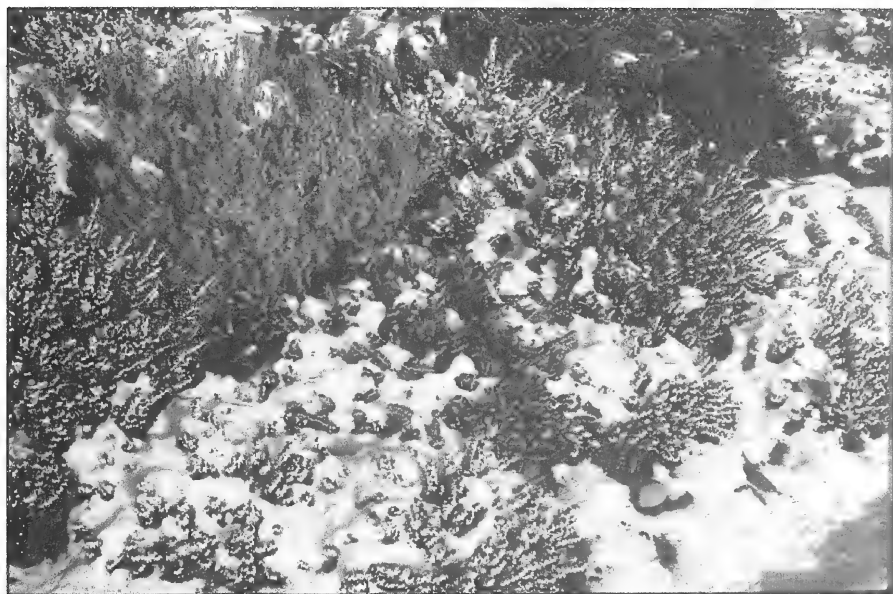


Fig. 1. A snow scene in the previous winter.

I have long prized and cosseted certain unusual heather species which have the reputation of being tender, as I mentioned in my article "Heathers in the glasshouse" (*Yearbook* 1999: 11-21). Some of these species are hard to get and I only have examples of some of them by the kindness of fellow members, particularly Professor John Griffiths and our President, David Small. It would be discourteous to them as well as potentially catastrophic to me to lose my small stock by carelessness. So I take cuttings each year and keep stock plants in a heated glasshouse during the Winter. However, since moving to Loughborough four years ago I have progressively planted examples outside and have had more success in raising them than I had expected. My main



Fig. 2. *Erica scoparia* subsp. *platycodon* after the previous winter.

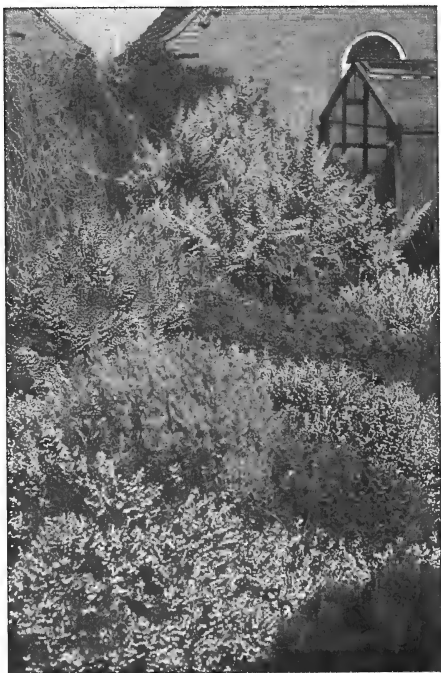


Fig. 3. A collection of heathers crowned by *E. lusitanica* after the winter described in the article.

purpose in this article is to report my observations following the Winter of 2000–2001 after re-capitulating on reports on hardiness in earlier *Yearbooks*.

In particular, there are articles by Mr T. A. Julian (our much-respected late Vice-President, Albert Julian) in the *Yearbooks* of 1980 and 1983 in which he reported on frost damage at Harlow Carr, Yorkshire, in the severe winters of 1978–1979 and 1981–1982. The 1980 *Yearbook* contained reports by other members in relation to the Winter of 1978–1979 and also a reprint from the 1963 *Yearbook* of members experiences in the severe Winter of 1962–1963.

Mr Julian reported that the Winter of 1981–1982 had the lowest recorded temperatures of the century, going down to -16.9°C on one occasion. In that Winter, there was damage even to some *Calluna vulgaris* and *Erica tetralix* cultivars but severe damage to *Daboecia cantabrica*, *E. arborea*, *E. x darleyensis*, *E. ciliaris*, *E. cinerea*, *E. erigena*, *E. mackaiana* and *E. vagans* with some cultivars killed off. In particular, *E. australis* 'Riverslea' and *E. umbellata* were killed off, and all the top growth of *E. lusitanica* and *E. x veitchii* was killed but basal shoots later appeared.

Others in 1980, including Mr J. Bridgland of Hampshire, reported some "burning" of the tops of *E. lusitanica* but *E. australis* untouched. Mr A. W. Jones of Somerset said that the temperature in his garden in January did not rise above 3°C and reached -12.5°C. There were cold north-easterly gales during this period and he told me later that he considered desiccation of plants while the ground was frozen was the cause of a number of plant deaths. Among the casualties were *E. arborea*, *E. lusitanica*, *E. x veitchii* 'Exeter' and *E. multiflora*. However, *E. manipuliflora*, *E. umbellata* and *E. terminalis* were unharmed. It appears from these reports that latitude and microclimate played a part.

By comparison with that extreme Winter, our experience in Loughborough in the East Midlands has been benign during the last four winters, though I have measured temperatures as low as -7°C. The wet and windy Autumn and early Winter of 2000-2001 was unusual by any standard. There was no frost here at all before Christmas. I am a native of the East Midlands and cannot remember any other early Winter like it in these parts. In January there was a long cold spell with several snowy days. During a two-week period daytime temperatures stayed close to zero and the ground remained frozen, though night temperatures were not excessively low, perhaps down to -5°C and there were no strong winds. February was also cold with many frosty nights.

In this Winter, I observed almost no harm to the North European species considered hardy – *Calluna vulgaris*, *E. tetralix*, *E. cinerea* – or to those known to succumb in very bad winters – *Daboecia cantabrica*, *E. erigena* – or English varieties of *E. ciliaris*. However *E. vagans* 'Valerie Proudley' suffered tip damage (the plant stands next to *E. x griffithsii* 'Valerie Griffiths' which escaped unharmed.) My comments on the rest follow.

DABOECIA

D. azorica: I planted out four good strong plants in the spring of 2000. By the Autumn two had died and I had dug up and repotted a third (which subsequently revived and is currently doing very well in its pot). The fourth did rather better and was in passable condition at the beginning of the Winter. The Winter had no deleterious effects on it and it made steady if unspectacular progress during the Summer of 2001. Clearly, I need to keep these two remaining plants under observation. Further experiments will be possible when this year's cuttings are ready for planting out. Incidentally, my plants, which I have been propagating on, mainly in pots, year after year for ten to 15 years, are clones of a plant brought back from the Azores by David McClintock and Don Richards in 1974.

ERICA

E. arborea: no damage, not even to 'Albert's Gold' which has suffered slight tip damage in some recent winters.

E. australis: 'Riverslea': no damage to well-established, 4 ft (1.2 m) high plant, which is however well sheltered. 'Mr Robert': slight damage to tips of well-established plants. In my former garden in Surrey, 'Mr Robert' suffered tip damage and split stems in most winters.

E. x afroeuropaea (E. baccans x arborea): extensive damage to tips and upper stems although the plant was situated in a very sheltered spot. However it recovered fully during the following Summer. It suffers similar damage each winter. This interesting Kramer hybrid has been growing in my garden for three years and is 4 ft (1.2 m) high. It flowers sparsely and I grow it mainly for botanical interest.

E. bergiana x spiculifolia: no damage observed. Another Kramer hybrid and this one flowers freely to make a good garden display.

E. ciliaris: 'Fada des Serras': considerable damage with some main stems splitting and damage to tips. The plants recovered in the Summer. This splendid cultivar was found in Portugal by Mr J. Tucker. The clumps in my garden are well established and stand 2 ft (0.61 m) high.

E. x griffithsii: no damage to 'Heaven Scent', 'Valerie Griffiths' or 'Ashlea Gold'.

E. lusitanica: slight damage to tips. My plants are now well established, and 6 ft (1.8 m) high (after four years!). They are a glorious sight from late October through to April. My interest in this species was first aroused by Major-General Turpin who used to attend Heather Society meetings wearing heather in his button hole and for the November Councils he not infrequently chose *E. lusitanica*. It greatly intrigued me that *E. lusitanica* flowered so early, and I was not satisfied until I had acquired a plant of my own and had the joy of seeing it flower in October. *E. lusitanica* is a prolific seeder and propagates naturally in warm climates to the extent of being a nuisance. This characteristic is however valuable for me and I don't bother with cuttings.

E. mackaiana: 'Shining Light': no damage to this Spanish cultivar which has prolific snowy white flowers and bears fertile seeds. I have tested this point by collecting and sowing seeds. Currently, I have six seedlings in flower and the plants and flowers are indistinguishable from the parent.

E. mackaiana subsp. andevalensis: f. *albiflora*: slight damage to tips of well-established plants in sheltered position; f. *andevalensis* (pink form): no damage, though these plants are somewhat better sheltered than the white ones. As a point of interest, I find the pink form far superior to the white one. It flowers earlier, is more prolific and has a more attractive habit.



Fig. 4. *Erica australis* 'Mr Robert' in full flower after the winter described.

E. maderensis: extensive damage to tips. I planted three plants in the early Summer to give them time to establish themselves before the Winter. *Erica maderensis* (at least the form I have) is low-growing, woody and develops slowly. The ones I planted out were only 3ins (7.5cm) across, about three years old, very healthy and established themselves well with new growth during the Summer. A fourth plant of the same size was planted in a stone receptacle about 12ins (30cm) above the ground and close to a wall of the house in a sheltered position. It suffered no damage.

David McClintock and Don Richards (*Yearbook* 1976: 15) introduced the clone. Some years ago I discussed the hardiness of the plant with David McClintock and he pointed out that it grows high on the mountains of Madeira where it is sometimes covered with snow. He therefore thought that it would be hardy in England. I have tried the species outside before with results similar to those described above and I doubt if it can be classed in the same bracket of hardiness with, say, *E. lusitanica* or *E. australis*. However the plants which suffered damage (and one of them looked to be in a very sorry state at the end of the Winter) have recovered well and are currently looking lush.

E. manipuliflora: 'Korçula': extensive damage to tips and stems. It is possible that there were causes other than frost since this cultivar does not do well for me. However, the plants have recovered well. 'Aldeburgh': extensive damage to tips of a well established plant and some young ones. All recovered during the following Summer.

E. multiflora: 'Formentor': central stem split and tips badly damaged. It did not recover. Interestingly, 'Formentor' has survived earlier winters with little damage. However the frost, though not more severe this Winter, was never-the-less sustained for many more successive days than in earlier ones.

E. x oldenburgensis: 'Ammerland': no damage.

E. scoparia **subsp** *scoparia*, *azorica*, *maderincola*: no damage to well-established plants; subsp. *platycodon*: extensive damage to tips of a well-established, well-furnished 2 ft (0.62 m) high bush. The tips split but the main stems did not. This is typical of damage observed in earlier years. The plant went on to flower in the Spring and has recovered

E. umbellata: pink clone (*not* 'David Small') and white clone now named 'Anne Small': no damage and the plants flowered beautifully in May–June.

E. x veitchii: 'Exeter' and 'Pink Joy': some tip damage but the plants recovered and flowered well.

CONCLUSION

The Winter of 2000–2001 was characterised by a warm, wet November and December followed by long cold spells in January and February. The temperatures of the latter were not excessively low but there were sustained frosts. The plants may have continued growing long into the Winter and the stems no doubt were turgid and so susceptible to frost damage. We were largely spared the troubles of desiccating winds during the cold spells. These features appear to explain the observations made above.

It appears that micro-climates from one region to another and even within individual gardens are important in determining what species can be grown out-of-doors in any given place. It pays to experiment and explore but only when there are plants in reserve in case an experiment fails. This year, I have a spare *E. bocquetii* which I have planted out in good time to get established before the Winter. I have selected the site carefully to give it a good chance of success.

The English climate has become warmer in recent years and whether or not this is a feature of global warming it has enabled us to enjoy growing certain plants out of doors which are at the edge of hardiness here in the Midlands. Will the warm trend develop and so encourage us to try Cape heaths in the open here? Perhaps, but I intend to go on taking those cuttings to hedge my chances of retaining a collection of interesting heathers.

Wild heathers of Apulia (Southern Italy)

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Fig. 1. Habitat of *Erica manipuliflora*.

The family Ericaceae is represented in the Italian flora by nine genera and 22 species (the number for each genus in brackets): *Arbutus* (1), *Andromeda* (1), *Arctostaphylos* (2), *Calluna* (1), *Erica* (8), *Loiseleuria* (1), *Rhododendron* (2), *Rhodothamnus* (1) and *Vaccinium* (5) (Pignatti, 1982).

The eight species of *Erica* are *E. sicula* Guss. (see McClintock, 2002: this issue), *E. terminalis* Salisb., *E. cinerea* L., *E. carnea* L., *E. scoparia* L., *E. arborea* L., *E. multiflora* L. and *E. manipuliflora* Salisb. Only the last three species are present in the Apulian flora, together with *Arbutus unedo*.

Erica arborea is the famous pipe "bruyère" (*erica da pipe*), and can be a shrub or a tree up to 5 metres tall. The flower has a white corolla, with reddish anthers included in the corolla. It is widespread on the Italian peninsula, where it may be found in holm oak (*Quercus ilex*) groves, in scrub and garrigue,



Fig. 2. Distribution in Apulia of *Erica multiflora* (-----) and *Erica manipuliflora* (—)

generally on soils acidified by fires, at altitudes between 0 and 1200 metres. It blooms from March to May. The wood, which is hard and not very combustible, provides the briar pipe (Everett, 2000).

In Apulia this species is common but localized. It is present especially in the "Macchie di Termolito", near Alimini Lakes, and at Frassanito in the Province of Lecce, at Torre Colimena (Taranto), near Noci (Bari), and in many localities in Gargano (Foggia).

Erica multiflora is a shrub that can reach 1.5 metres in height. The flower has a rosy-violet corolla, with dark brown anthers projecting from the corolla. The species is typical of scrub and garrigue on calcareous soils in central and southern Italy at altitudes between 0 and 800m blooming in September and October.

Along the Tyrrhenian coast and on the off-shore islands *E. multiflora* is one of the characteristic species of a phytosociological association named *Erico multiflorae-Genistetum tyrrhenae* Biondi, which is typical of garrigue in windy zones, and is formed on lava, rocky or stony substrata (Biondi, 1996). The species that are characteristic of this association are *E. multiflora*, *Genista tyrrhena*, *Lavandula stoechas* and *Callicotome villosa*. In Apulia, *E. multiflora* occurs only in the Province of Foggia, and particularly on Gargano Promontory and along the coast between Varano Lake and the northern limit of the region.

E. multiflora is also a typical species of another association, *Erico multiflorae-*



Fig. 3. *Erica multiflora*



Fig. 4. *Erica manipuliflora*

Halimietum halimifolii Taffetani & Biondi (Taffetani & Biondi, 1989). This vegetation type is found only in Molise, along the coast of Ramitelli, and in Apulia, at Torrefantine. It is a kind of dense garrigue that colonizes the highest parts of stable dunes. The characteristic species are *E. multiflora* and *Halimium halimifolium*.

Erica manipuliflora, known as “*erica pugliese*” (Apulian heather), is a shrub to 0.6 metres tall. The flower has a rosy, rarely white, corolla, with rust-coloured anthers that project from the corolla. It is a thermophilous and xerophilous species, typical of coastal scrub and garrigue, and thus it never occurs inland. It blossoms from August to October.

Its area of distribution is the eastern Mediterranean, including Slovenia, Croatia, Montenegro, Albania, Greece (including Crete), Cyprus (see Viney, 1994) and Turkey (Brullo *et alii*, 1986). In Italy it is found only on the Salentine Peninsula (Salento), the southern part of Apulia, where it ranges along the Adriatic coast from Brindisi to Otranto. It is found also in an isolated station on the Ionian coast at Punta Pizzo, near Gallipoli.

The vegetation type that includes the garrigue inhabited by *E. manipuliflora* is an endemic association defined as *Saturejo cuneifoliae*–*Ericetum manipuliflorae* Brullo, Minissale, Signorello & Spampinato (Brullo *et alii*, 1986). This forms on

calcareous substrates, where there are pockets of deep soil mixed with emergent rocks. The characteristic species of this association are *E. manipuliflora* and *Satureja cuneifolia*.

The presence of *E. manipuliflora* in Salento is one of the most prominent characteristic of Apulian flora.

Conclusion

Apulia lies in the overlap zone between the Western and the Eastern Mediterranean. Thus, it is possible to find in this region numerous plant species that are either at the eastern or the western limits of their distribution (Marchiori *et alii*, 1998). This also applies to animals, making Apulia a region of particular importance for biogeographical studies in the Mediterranean area.

We have not found any information about present-day uses of any of the species of *Erica* noted above.

Concerning their vernacular names, *E. arborea* is often called "*scopa bianca*" (white broom). The word "*scopa*" is linked to many species of *Erica*, because these plants were often used in the past to make brooms – the name *Erica scoparia* is a good proof of this fact.

While some species of *Erica* are offered for sale by Italian nurserymen, in our region gardeners have a stronger preference for exotic (foreign) species than for interesting local ones!

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Traditional uses for heathers in Spain

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Heathers are found over most of Spain, forming a basic part of forest substitution scrub, being particularly common in regions under the influence of the Atlantic Ocean.

As with plants such as chestnut (*Castanea sativa*), cork tree or pine in Spain, it might be correct to refer to a "heather culture" as peasants have developed a wide range of uses involving crafts, ideas and beliefs. The regions with the richest heather cultures are, notably, those with greatest Celtic influence, such as Galicia and Asturias, in areas where heathers are more common.

Until recently, heathers were generally an important resource in cattle rearing, and still are in some regions. A mixture of heathers and other bushes, known as 'rozo' in northern Spain, was traditionally harvested and crushed for use as cattle feed and bedding. Heathers are still used as firewood, the most useful part being the branch stumps for use in fireplaces and ovens. Besides being a primary source of high quality charcoal and timber for manufacturing objects, heathers are also a suitable raw material for dyeing and tanning and produce excellent thick, dusky honey. Due to the flowers' ability to retain colour when dried, several *Erica* species, especially *E. australis*, are used for making beautiful bouquets that can be displayed all year round. Most heather species are also used as diuretics.

Finally, heathers are, of course, present in the symbolism of the Galician and Asturian cultures, having been used to ward off ghosts and to induce rain by burning them outdoors with ferns (Rivera & Obón 1991).

Vernacular names of heathers in Spain

The most widespread term for heather in Spain is 'brezo' (pl. 'brezos'), with different local variations ('berecilla', 'bereza', 'berezo', 'berezu', 'brecina', 'vericiu'), which, in contrast to English, is not applied in Spanish to *Calluna vulgaris*, but only to species of *Erica*. From the Hispanic Latin 'brôccius' and the Celtic 'vroicos', this term is documented for the first time around the

Scientific name English Name	Spanish names (province)
<i>Calluna vulgaris</i> Heather Ling	argaña, ganzo, gorbiza, queiriño, queiroga, urcias (As) brecilla (Ba); brecina, brezo, bruguerola (Cs); biércol (Gu) brecina, brezo, yerba del riñón (Hu); bercol (M); brecina, carpaza (P); bereza, bereza negra, berezo, berezo negro, brecina, brezo de lastra, matigo, rosoño, tereno (S); aulaga, bercol, biércol, olaga, sardino, tanarro (Sg)
<i>Daboecia cantabrica</i> St. Dabeoc's Heath	brezo vizcaíno, urciona (As); carpanza (Lu); bereza, berezo, campanillas, matigo, urze, zarpa (S); tambarilla (Corominas), tambarella, tamborela, tamborella
<i>Erica arborea</i>	frezco negro (Ab); bruc, bruc de la flor blanca, gat pixat (B); berezo blanco, berezo castellano (Ba); brezo (Co; Cs; J); brezo albar (Gu; M); ur blancal, uz bornal (Lu); brezo cucharero (Ma); brezo blanco, urz blanca (P); berezo, berezo grande, berezu, brezo, brezo escoba, escoba, juncia, hayuz (S); berezo albar, berezo, brezo (Sg)
<i>Erica australis</i>	bereza colorá, berezo colorao (Ba); uz albar, uz negral, uz rubia (Lu); berezo negral (M; Sg), brezo negral (M); brezo rojo, brezo rubio, urz rubia (P); bereza, berezo (S)
<i>Erica cinerea</i> Bell Heather	carpanza, carpanzo, carpaza, queiroga, queiruga, setembrina (Lu); biércol, carracina (P); bereza, bereza negra, bereza triscona, berezo, brezo, brezo negro, rosoño, terenos, urze (S)
<i>Erica erigena</i> Irish Heath	brezo (Mu)
<i>Erica multiflora</i>	bruc, bruc vermell, bruga (B); arrós bord, arrosset, brezo, bruc, bruque, cepell, crespínell, pedorrera, petorrera (Cs); brezo, pedorrera (Mu)
<i>Erica scoparia</i>	bereza de los arroyos, berezo de los arroyos (Ba); brezo rubial (Gu); brezo de escobas, brezo perruno (M)
<i>Erica tetralix</i> Cross-leaved Heath	brezo de las turberas, mogariza (Ba); berecebo (CR); carroncha (P); berezo de laguna (S)
<i>Erica umbellata</i>	quiruela, quiruelo (Ba); mogariza, quirola (P)
<i>Erica vagans</i> Cornish Heath	biércol, graspo (P); bereza, berezo, berezo rojo, brezo, brezo rojo (S)

Table 1. Species and vernacular names in Spain



Fig. 1. Eighteen provinces in Spain belonging to twelve autonomous regions.

eleventh century as 'verezo', and later 'breço' in old Castilian. Other forms, which occur in regions of Spain outside Castilian influence, such as 'biércol' or 'biélcol' in Navarra and Rioja, and 'bruc', 'bruga' and 'bruque' in Catalonia, have a similar origin. The same occurs in other European regions of Roman influence, such as the Grisons canton (Switzerland), where it occurs as 'brutg', in the Engadina (Italy) as 'bruoch', and in Gascony as 'bròc' (Corominas 1980: 1: 662). The ensemble of heathers, *i.e.* an aggregation of 'brezos', is called 'brezal' in Spanish (pl. 'brezales').

As Corominas (1980: 1: 662) pointed out, in some Latinate places, 'brezo' is replaced by 'urce' or similar forms ('urcias', 'urze', 'urz', 'uz') from the Latin 'ûlex, -icis' (Corominas 1980: 5: 718). It is worth noting that 'urz', common along the Cantabrian coast of Spain, also occurs in Gaelic.

The antiquity of knowledge about heathers in Spain is confirmed by the existence of the term 'argaña', employed in Asturias for *Calluna vulgaris*. The suffix '-anna', as in the word 'pestaña', meaning 'eyelash', suggests a pre-Roman origin.

Traditional uses for heathers in Spain

This paper deals with information on the uses of nine species belonging to the genus *Erica*, *Calluna vulgaris* (L.) Hull and *Daboecia cantabrica* (Hudson) C. Koch, from among the 14 heather species occurring in Spain (Ramón-Laca & Morales 2000). The data comes from our own studies (Gu, M, S) and from bibliographic references (15 other provinces indicated after the corresponding reference). They include 18 provinces belonging to 12 *comunidades autónomas* (autonomous regions): Albacete (Ab); Asturias (As); Barcelona (B); Badajoz (Ba); Córdoba (Co); Ciudad Real (CR); Castellón (Cs); Cuenca (Cu); Guadalajara (Gu); Huesca (Hu); Jaén (J); Lugo (Lu); Madrid (M); Málaga (Ma); Murcia (Mu); Palencia (P); Cantabria (S); Segovia (Sg). (These abbreviations are associated with each bibliographic reference, except those without a specific regional association which are indicated as Font Quer (1999) and Quer (Gómez Ortega 1784).)

The uses are listed according to the following categories:

1. Human food (no information reported)
2. Cattle and domestic animal feed
3. Medicinal (veterinary or toxic)
4. Industrial and handicrafts
5. Ornamental
6. Folklore
7. Agriculture, forestry and pasturing.

Calluna vulgaris (L.) Hull

2. Used for feeding cattle, especially in winter (Ba); it is melliferous (S; Sg) although the honey is generally left for the bees since its excessive viscosity makes it difficult to harvest (M). Bees gather the dark pink pollen and abundant nectar from this plant, but the honey remains congealed in the honeycomb cells due to the high protein content (2%), which makes harvesting difficult (As).
3. Once they have bloomed, the stems are used in a distillation for dissolving kidney stones (Hu), and as an antiseptic for the urinary tract (As). Dissolved at 3%, it is employed as a diuretic and for losing weight (Cs). The plant was formerly used externally as an antidiarrhoeal agent, to cure acne and herpes, as an antiseptic and to cure joint pain and gout. Its leaves were distilled to cure bovine mastitis (Font Quer).
4. Used for making brooms (S; Sg), especially suitable for sweeping sheep dung (Sg). The stems were used both for making large brooms and roofs (As). The wood made good fuel for traditional ovens (As), both for baking bread and pottery (Sg).
7. As cattle bedding ('estro' or 'mullido') (S).

Daboecia cantabrica (Hudson) C. Koch

2. It is a valuable melliferous plant (S).

Names\Provinces	Ab	As	B	Ba	Co	CR	Cs	Cu	Gu	Hu	J	Lu	M	Ma	Mu	P	S	Sg
<i>Calluna vulgaris</i>		2,3 4		2			3			3			2				2,4 7	2,4
<i>Daboecia cantabrica</i>																	2,3 4,7	
<i>Erica arborea</i>	4		4	2,4	4,7		3		4		3,4	2,3 4,7		4			4	4
<i>Erica australis</i>				2,3 4								2,3 4	4			4,6		4
<i>Erica cinerea</i>												2,3 5				4	2,3 4,5 7	
<i>Erica erigena</i>															3			
<i>Erica multiflora</i>			4				2,3 4	5							3			
<i>Erica scoparia</i>														4				
<i>Erica tetralix</i>				2,4		2,4												
<i>Erica umbellata</i>				2,4												4		
<i>Erica vagans</i>																	2,4 7	

Table 2. Traditional uses of heathers in Spain. Shading indicates species occurs in the province.

3. Used for castrating animals. Clothes soaked in a distillation were used for healing and preventing infection (S).

4. For making brooms, although some maintain it is not suitable for that purpose, and pipe smoking (S).

7. As cattle bedding (S).

Erica arborea L.

2. It is a valuable melliferous plant; the flowers give off a nice smell (Ba; Lu).

3. Distillation (2%) of the aerial part is used as a diuretic and for losing weight (Cs). It was drunk to cure urinary problems (Lu), and bathing in distillations of this and other herbs was thought to relieve the discomfort of rheumatism. The distillation of young shoots was drunk to prevent enuresis (J).

4. The stems are used in the making the roofs of grain stores (known as "hórreos" in Asturias) and huts ('pallozas') as the base underlying the impermeable layer made of rye straw. Such roofs lasted between 4 and 8 years (Lu). The branches are used for making brooms (Sg) although some people dislike them, preferring other species: '*Te pones a barrer con ello y es demasiado dócil, y romper no se rompe, pero no vale.*' [You try sweeping with it, but it's too soft, and, well, it doesn't break, but, even so, it's no good



Fig. 2. Spoons from *E. arborea* in Fuenlabrada de los Montes, Badajoz (E. Blanco).

for that!'] (S). Its roots and stumps yield an excellent wood for making tobacco pipes (Ab; B; Co; J; S). Necklaces, jewel cases and musical instruments are made from the roots. To be worked, the wood needs to be boiled for 12 hours and then left to dry (J). The wood has even been exported to England, and is used for making wooden spoons and other minor handicrafts (Ma). Extremely hard, it is used for making bell clappers ('campanos') or cowbells ('cencerros'), collars ('cebillas', i.e. wooden collars used for tethering animals to mangers), clogs ('albarcas' or 'almadrenas'), heels for clogs ('machorras'), harder than the more common hazel ones. Craftsmen use the twisted stumps for making beautiful figures and pots (S).

In olden times, goatherds cut the wood to make spoons and other handicrafts, mainly tobacco pipes; the whole process was conducted manually using gouges, cleavers, knives and other tools. Some craftsmen made necklace-like spoons and forks, as well as salters, mortars, water jars and adornments. The decorative patterns on such pieces are always geometric and have their origins in an old tradition (Ba). The stumps were employed to heat bread ovens (Lu). Used for making charcoal (Ab), especially that required by smiths (Sg). Because of its high calorific potential, the charcoal made from this plant was used in forges. Too twisted for bread ovens, the stumps made better firewood for kitchens (S). Mixed with furze and other plants for use in tile ovens (S) and also in braziers (S). The charcoal was obtained by burning the wood in a hole in the ground covered with stone slabs (Gu).

7. Its branches were useful for cattle bedding ('estrar') when no other material was available (Lu). The soil from this plant is used as fertiliser in pots (Co).



Fig. 2. *Erica australis* and 'Brezal' of *E. australis* in Alto Campoo, Santander.

(M. Pardo de Santayana)

Erica australis L.

2. Considered unsuitable as cattle feed (Ba), but valuable as a melliferous plant (Lu).
 3. A distillation used to cure pulmonary illnesses (Lu) and bovine pleurisy (Ba).
 4. Its roots were sought after for making pipes ('cachorras') (Ba). Its branches are suitable for making huts and stable roofs (P). Once dried, burnt and peeled, the branches ('ardentes' or 'gancios') were used for lighting when there was no other fuel (Lu). The burning branches were employed for scorching ('socarrar') the skin of wild boar ('guarro') to clean it of hairs (Ba). Branches are also used in bread ovens, the stumps being preferred in kitchens (Lu). Used for making charcoal (M), especially by smiths, since it is better quality than that obtained from *Erica arborea* (Sg). The basal parts of the branches were preferred for this use. This charcoal was used almost exclusively in forges, being the only one valid for sharpening ('abuzar') the harrow ('cavaeras') due to its high calorific power. The charcoal was made by charcoal-makers and smiths. The charcoal stack ('carbonera') was made by making a hole ('joya') in a depression in a piece of open ground. After the surroundings were cleared, the branches were arranged and a layer of fine, pebble-free soil was laid over it. The charcoal stack was kept burning for two or three hours. The resulting charcoal was spread with a stick or hook made of holm oak wood, called a 'jurga'. This heather burnt badly, lasting two or three hours and cooling in half an hour (Ba). Highly calorific charcoal was obtained from the stumps for use in forges by smiths, and in lime ovens (Lu).

6. The Sanctuary of Nuestra Señora del Brezo (Our Lady of the Heather) is in northern Palencia. In keeping with the custom of naming girls after the Virgin, 'Brezo' is a common girl's name (P).

Erica cinerea L.

2. Considered an excellent melliferous plant. It produces dusky and highly aromatic honeys (Lu; S). It is readily consumed by livestock (Lu), especially mares, when no other resource is available (S).

3. Its distillation was reputed to be a good diuretic. The flowers were macerated with olive oil to cure rheumatism. As a poultice made with the same clay used for tiles and pottery, it was finely crushed and mixed with garlic, eggs and onion (S). The flowers help to maintain the right cholesterol level (Lu).

4. Used for dyeing (P) and for fires although it has a tendency to produce too many sparks. The stumps are used as firewood (S).

5. Schoolchildren make bouquets out of this plant (Lu), and women gather it for making dry bouquets (S).

7. Used as cattle bedding (S).

Erica erigena R. Ross

3. Used as an astringent (Mu).

Erica multiflora L.

2. It is a valuable melliferous plant (Cs).

3. Used as a diuretic and galactotropic (Mu). The distillation of the aerial parts, dissolved at 2%, is employed as a diuretic and for losing weight. The distillation of the leaves and the finely triturated bark of the stem, dissolved at the same rate, reduces blood pressure (Cs).

4. It is suitable for making brooms (B).

Its timber is used for making fire although the flowers, when burnt, produce a characteristic sparking, said to send people to sleep (Cs).

5. Used in jars as a decoration (Cu).

Erica scoparia L.

4. This is the best species for broom making (Ma). In Barcelona, it was very common in the area of countryside belonging to the religious order of the Hyeromites ('Jerónimos'), and is used in stacks for burning, known locally as *dinadas* (Quer).

Erica tetralix L.

2. '*Le gusta al gano, lo castiga mucho*. [Cattle like it, they won't leave it alone]'. Goats consume it avidly (Ba; CR).

4. Hard, resistant and long-lasting it is used for making long brooms that were used to sweep stable yards (Ba; CR). Used for covering carts full of charcoal made from its roots (Quer).

Erica umbellata L.

2. It is a valuable melliferous plant (Ba).
4. The stumps were used for making charcoal (P).

Erica vagans L.

2. It is a valuable melliferous plant (S). Livestock may eat it, especially mares (S), in periods of scarcity, when they are tender.
4. This species is preferred for making brooms to clean stables (S).
Used for making fire. The stumps are used as firewood (S).
7. Used as cattle bedding (S).

Erica sp.

2. '*Las abejas hacen gran cosecha de las flores, pero la miel no es la más apreciable por su color amarillo y consistencia de jarabe.* [Bees make large amounts of honey from their flowers, but it is not the most highly appreciated because it is very yellow and a syrupy consistency]' (Quer).
3. According to Tournefort, the distillation of this species was reputed to be a good diuretic. According to L'Écluse, the essence of the flowers was used to cure facial herpes. According to Tabernamontanus, steam baths using the leaves and flowers were supposed to mitigate the discomfort caused by gout (Quer).
4. Used for natural roofing under branches of *Cytisus scoparius* (As). Used for making charcoal. The charcoal stacks were arranged in a 0.5 m-deep, 1 m-diameter hole. This formed the oven, the floor of which was covered with stone or very small branches, and later filled to a height of 1 m with stumps. It was then lit and the oven was covered with stones or grass, with soil over everything. This activity ceased in 1965 (Gu). The main portion of charcoal used in forges and similar occupations was made from heather stumps (Quer). Heathers are used for dyeing leather (S).

Conclusions

Several popular names exist in Spain for these plants, some being very local while others are generics. They provide a measure of the ethnological richness associated with the information about, and uses of heathers in Spain. The most common uses are technological (see Table 2), for making charcoal, firewood, brooms or roofs, timber for handicrafts and, above all, tobacco pipes. The next most important uses are as a foodstuff and as a melliferous plant. Medicinal and veterinary uses come third. We hope to continue gathering information in order to produce a more extensive work, which should include Portugal and the Canary Islands.

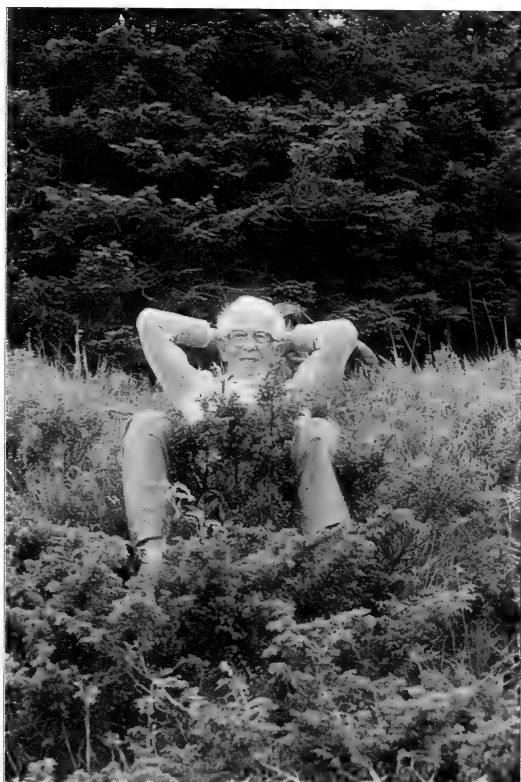
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Thomas Albert Julian (1908–2001)



Albert Julian initially lived in Leicester, where he attended Alderman Newton's Grammar School. At this time his ambition was for a job working with telephones. On leaving school he became a trainee engineer with the Post Office, but was deeply disappointed when he was forced to leave after two years, when it was found that he had a heart condition, for which he took medication for the rest of his life.

Albert then joined GEC at their telephone works in Coventry, but his great interest in radio led to a change in career direction, and he was soon working with domestic wireless and the synchronisation of gramophone records with silent films to give talking pictures.

In 1934 he set up the radio service department and special electronic products unit for GEC in London. During this period he designed and produced three high fidelity radio receivers for the Royal Train that was in use at the time. The train was taken from Wolverton to Euston especially for him to test them. One can still be seen in a carriage preserved in the Railway Museum in York.

He also worked with experimental high definition television and in 1936, when the BBC started its service from Alexandra Palace, he installed the first commercial television in a shop (Alderton's) in Edgware Road. A world first.

During the Second World War he was involved with the production of communication and sound equipment for RAF aerodromes, and in repairing equipment at RAF Coltishall during the Battle of Britain. Then he joined the bomb disposal scientists designing bomb location and disposal devices. The most notable device could detect mines buried in more than 12 feet of sand.

After the war, he became Radio and Television Service Manager for GEC, and was on the committee of the Radio Industries Council, which organised exhibitions at Earls Court. He took exhibits to various world fairs, for example introducing television to Damascus, Syria in the early 1950s.

A few years before he would reach pensionable age, he moved to Clarke & Smith as director of their R&D Company, before becoming Chief Engineer with the parent company. Here he worked with the teams designing the RNIB Talking Book for the Blind, and on the development of language laboratories.

The base for Albert's work in London in the 1930s was near Vincent Square, and he became a regular visitor to the RHS exhibitions.

After the war he had a house built in Surrey that had an acre of land, on which he planted ornamental trees, shrubs, perennials and fruit trees. The soil was derived from chalk, consequently he became very familiar with the problems of growing plants with alkaline root zones.

When he retired, he moved to the north of England, so that he and his wife could be nearer to their daughter Patricia and her family. He initially lived in Chinley on the edge of The Peak District, where for a year or two he battled with a very heavy soil derived from boulder clay.

When his wife died, he moved a few miles from Chinley to live in Whaley Bridge with his daughter's family. A short time before Albert moved to Whaley Bridge, Fred Chapple moved away. Consequently they never met.

It was around this time that he joined the North of England Horticultural Society, and his great interest in heathers began to flourish. He also had many other interests. He was a great traveller, and he visited most parts of the world, some of them several times, where he would make lasting friendships.

Albert was a very keen photographer, and for a few years developed his own colour films. He and someone he met on a visit to Iceland produced photographs that were used by the Icelandic Tourist Board in their promotional literature in the 1980s. After visiting Iceland for several years in succession, he eventually decided that Iceland was too grey, too wet and too cold. He found the islands of the South Pacific much more to his liking! In the last few years of his life he travelled less and less because increasing deafness began to cause problems.

He had a great interest in the archeology of the Holy Land, and attended several University of Manchester Extra Mural Courses concerned with that topic. A near neighbour for a short time was John Allegro, who was responsible for the translation of the copper Dead Sea Scroll. But Allegro grew impatient with the attitude of the rest of the team charged with dealing with the other scrolls, and left the University of Manchester and Whaley Bridge.

Our lives began to overlap in the early 1970s, when he joined an Extra Mural course in Horticulture that I had agreed to give in Salford. These courses gave me the opportunity to talk about new knowledge that was being produced in Universities and research stations, and to describe my own work. Some emphasis was placed on current techniques of measuring environmental parameters.

After one session he suggested that my research could probably benefit from his knowledge of electronics. He felt that he would benefit from close contact with an environment of active horticultural research, and he hoped that it would enable him to keep up with advances in electronics, particularly the use of new semi conductors that were appearing in increasing numbers. Over a period of nearly 20 years he produced a range of almost 50 pieces of equipment for me including devices to switch on the supply of nutrients to the root systems of plants grown with soil-less culture systems, data loggers, soil water monitoring equipment, etc., most of which was not available commercially.

The equipment he produced made it possible for many small research projects to be carried out by final year students studying Botany and Biology, and vastly improved the quality of many higher degrees.

During the last quarter of his life he became more and more involved with heathers. I first became aware of this involvement when he told me about a cultivar trial he was helping to run at Harlow Carr Gardens, Harrogate. Within a few years he was running the one-quarter acre plot more or less single-handed. Weed control had become a major problem, but a phone call to the now defunct Weed Research Establishment near Oxford, introduced both of

us to the recently introduced selective herbicide Casoron. Along with Gramoxone treatment to paths, he was able to keep down weeds single-handed.

From his records of the trial came detailed descriptions of many varieties, which provided the basis for the production of the International Register.

He was responsible for further trials at Harlow Carr. He propagated and planted heathers in prominent areas of the garden, particularly near to the entrance, which much to his annoyance had to be replanted three times when alterations were made to buildings. In my opinion his plants were the best reason for visiting Harlow Carr. His great efforts there were the eventual reason why the National Heather Collection was established at Harlow Carr Gardens, and in 1991 the Northern Horticultural Society presented him with a citation, medal and honorary membership for his 25 years service as an adviser to the gardens.

He propagated and planted heathers that flourished for several years at the Granada Arboretum of the University of Manchester, adjacent to the Radio Telescope at Jodrell Bank. Their colour made a great contrast to the acres of trees and was greatly admired by many visitors.

He was a member of The Heather Society for 27 years, and worked his way through their various committees, becoming an honorary Vice-President in 1992. He was on the team which designed the heather gardens at RHS Wisley and acted as consultant to Hazel Huddleston who designed Cherrybank Gardens, Perth. He negotiated with Bell's Whisky for a studentship to be established at Harlow Carr, enabling a student to work with heathers. Unfortunately the arrangement lasted for only a few years.

He had a great deal of skill with many things but everything was not always plain sailing. A large number of the plants he grew in glasshouses at the University of Manchester and Harlow Carr in containers died as a result of poor watering. Others that were planted out were lost as a result of the action of rabbits. But having decided to produce and plant out a given piece of soil, he would not rest until it was complete. He would often mention times when people he knew had been 'let down'. This seemed to stimulate him to even greater effort to try to compensate for their problems. He always went out of his way to be sure that he didn't let anyone down.

Out of his great enthusiasm for travel and heathers he met his second wife, Jean whom he leaves, as well as his daughter, two grandchildren and four great-grandchildren.

PETER NEWTON

[Photograph of Albert Julian relaxing among conifers in Croatia by courtesy of Mrs Jean Julian]

Dolf Schumann (1918–2001)

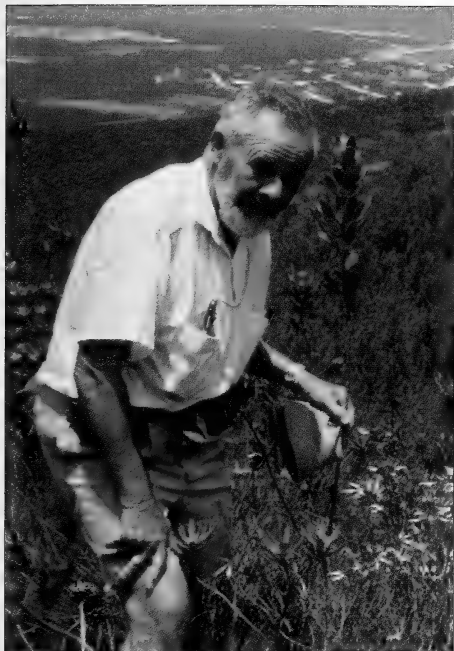


Fig. 1. Dolf with *Erica lageniformis*

It is amazing how amateurs who develop a passion for plants can achieve so much especially when that passion develops only in the later years of their lives. Dolf was such a person.

A. W. S. 'Dolf' Schumann was born in Cape Town and received his training at the Universities of Stellenbosch and Witwatersrand. He graduated with degrees in mathematics, physics, mining and metallurgy. He then proceeded into the mining industry spending 17 years in the Copperbelt of the then Northern Rhodesia (Zambia) where he gained much experience in the practical aspects of mining. In 1960 he returned to South Africa and joined a large mining house in Johannesburg as their operational manager and later their technical

director where he earned the reputation for being a top business manager and diplomat and a well-liked person.

His time in the mining and business world culminated in his being elected to the post of President of the Chamber of Mines where he was highly respected by all in his field including the government. At the time he was also a director in some 42 companies associated with the mining industry. As a result of all this work and his contributions in his field he was appointed honorary Professor of Engineering at the University of Stellenbosch.

In July 1978 Dolf retired from the hectic life of the business world in Johannesburg to a wonderful apartment overlooking the Atlantic Ocean in Cape Town. He planned for a quiet restful time with his wife Annie and their two married children and their grandchildren in Cape Town.

In 1980 while on a visit to a relative in the seaside resort of Hermanus he was taken on a hike in the mountains and introduced to the local Cape Flora

where he was struck by all the wonderful ericas. Afterwards over a beer he was shown the Erica book by Baker and myself and was “totally bowled over” by ericas. He decided there and then to make a photographic record of every species he could find.

At the time I was curator of the National Herbarium in Pretoria and was contacted by him for advice on how to proceed. Knowing that I would be returning to the Cape within a year I suggested he meet up with Gerhard Kirsten who had been collecting and studying ericas for some 15 years. Thus began a very fruitful partnership between the two of them.

On my return in 1982 I met Dolf for the first time and immediately realised that he was a person who knew exactly what he wanted to do and how to achieve it. He had acquired the right apparatus, made lists of all the species and where he could locate them and had begun his well documented collection of colour slides. However, he soon realised that it was not all plain sailing – getting his slides correctly identified was the biggest hurdle. Fortunately Dolf recognised that it was vital to back most of his photographs with voucher specimens that could be correctly identified. Here he found help from Gerhard Kirsten and later from my wife, Inge, and myself.

Dolf left no stone unturned in his quest for species. Fortunately he had the time, the financial resources and the motivation to travel widely and to collect and amass an unequalled collection of colour slides. After only ten years he had sufficient to warrant the publication of a book which was done in conjunction with Gerhard Kirsten and myself – *Ericas of South Africa* (1992) covering some 465 species. Clearly without Dolf’s passion for ericas this splendid book would not have seen the light of day.

I value very much the trips we did together in the mountains – he was a wonderful companion and raconteur. We collected together material of the species I later named after him, *E. schumannii* (Yearbook 1998) and, together with Gerhard Kirsten, their extraordinary new species, *E. amicorum* (*amicorum* = of the friends). Several new species Dolf discovered in the Great Swartberg with his young botanical companion, Jan Vlok, have just been published – *E. dolfiana* and *E. chionodes* (OLIVER, E. G. H. & OLIVER, I. M. 2001. Five new species of Erica (Ericaceae) from the Swartberg Range, Western Cape, South Africa and a note on *E. esterhuyseniae*. *Bothalia* 31: 155–16.).

The words written in a popular publication from his mining house on his retirement are appropriate – “some General Managers inspire affection, some respect. Schumann inspires love. Many staff members are devoted to him and some have chosen to join the group just because he was there”. What better words with which to remember a wonderful gentleman with a deep passion for ericas.

THE HEATHER SOCIETY'S PROCEEDINGS

30TH ANNUAL CONFERENCE, HEREFORD

Thanks to Phil Joyner, we made our way to Hereford for the 30th Annual Conference, from north, south, east and west of England, from America, Norway and even from Poland.

On arrival it was obvious that great care and attention had been paid to all the usual details of registration and room. Beautiful bowls of heathers were there to greet us, and it was very easy to slip into conference mode, greeting people one hadn't seen since last year, or perhaps for two or three years, and saying hello to others who had never attended a conference before. As we all share the same passion for heathers, there is always plenty to discuss.

Time for dinner. We were ushered into our section of the dining room by our own waiter who soon let us know that he was in charge. He addressed us in stentorian tones and explained succinctly the routine of the Three Counties Hotel. This set the tone for a most enjoyable dinner and our waiter made sure we wanted for nothing.

No time to linger. We all climbed the stairs for the opening of the conference. Arnold Stow, our Chairman, welcomed us, this being his first time in the Chair since his inauguration last year.

He introduced David Scott, our first speaker. David is warden in charge of Hartlebury Common, which is located near Worcester and covers some 90 hectares. It is considered to be one of the most important heathland site in the West Midlands. The main feature is dry lowland scrub heath. This supports a varied growth of heather, gorse and broom. He explained that sand and gravel had been extensively removed in previous times, the army had formerly held manoeuvres on the Common and that for a long while rubbish had been tipped there. It is all credit to the Countryside Services that Hartlebury Common exists today.

Before the rush to the bar, many people were examining the publications on all aspects of heathers and their growing which had been set out for purchase at the rear of the conference room. (There was also a chance to buy Charles Nelson's new series on the wild flowers of western Ireland. Should we ever return to Ireland for another field trip, these books would be a must.)

On Saturday morning everybody tried hard to remember the waiter's instructions about breakfast, and having mastered the routine, we were eventually served. Then we trooped upstairs for an eagerly awaited presentation.

Daphne Everett gave us a very polished talk about the creation (since 1984) and development of the garden at The Bannut. She and Maurice saw this as their “piece of heaven”. Not only did they create a successful garden for their own use, but they also ran a wholesale heather business producing a quarter of a million plants annually. Her hour was soon up and made us all keen to actually get there later in the day.

A welcome cup of coffee was served, and then it was time to board our luxury coach. Our driver was a most courteous man with a lovely local accent. As we pulled away from a certain set of traffic lights in Hereford, he was keen to point out the cannon ball embedded in the city walls. Did we see it? Some said “Yes!”, and others said “Maybe!”, and there would be more chances for those who had missed it.

Our first “port-of-call” was the nursery of John Richards. John took us to a beautiful reception room where tea and coffee was provided while he explained in a most amusing way the origins of the nursery and its growth over the previous 30 years. From humble beginnings – one man and a Honda 50cc motorbike complete with spade and watering can – it has become a very large enterprise, specialising in the production of *Clematis*, heathers, trees and shrubs. There are from 25 to 40 employees, depending on the time of the year, working in many large greenhouses and packing sheds.

John told us about meeting J. F. Sparkes, and what a thrill it was to meet a man with a heather to his name. Arnold was able to say that amongst the people assembled that morning, there were several heather-name owners – Valerie Griffiths and John Griffiths, Barry Sellers and Charles Nelson – and Jean Julian (see p. 74). John acknowledged that he was therefore in very august company. We were then free to wander around the greenhouses and outside growing areas. All the plants looked wonderful and many people were exclaiming with pleasure. It was such a shame that we were not allowed to



Fig. 1. John Richards (second left) explaining how to grow quality heathers



Fig. 2. Informality returns after the group photograph at The Bannut. [Eileen Petterssen]

purchase a single plant. We understand why as the nursery is purely wholesale. Maybe it was just as well as there wouldn't have been room in the coach for the members. We had to be dragged away.

Next, to a scenic place in the Malvern Hills for our picnic lunch. Some stayed near the coach, while others took a short walk up the ridge, which gave a choice of views, although the wind really did make the decision for most of us. Just below the ridge, out of the wind, made a wonderful place to munch on the lunch, with the air filled with the seeds of rosebay willowherb – spread out in front was a magnificent view over Worcestershire. Not much time to bask in the sun – a quick run up the ridge but the realisation dawned that the top which we could see was not The Top, so we turned back to the coach.

It was time for the visit to The Bannut. Maurice and Daphne were waiting to greet us. We could wander, or sit, or have a guided tour. The photographs we had seen earlier became reality, and all of us were able to appreciate the work that had gone into creating this lovely garden. The different "rooms" were explored and there was great clicking of cameras. Not only were there many heathers to see, but there was the trusty tractor and other machinery too. Like many of us, the Everetts said there are just not enough hours in the day for all of the jobs that need doing. I longed to get shredding for them, to

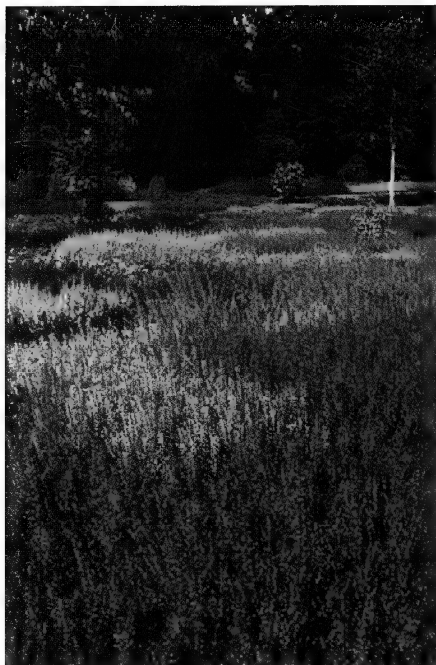


Fig. 3. A view of the heather garden at The Bannut

give a hand, as there was a wonderful pile of material waiting to be returned to the soil whence it had come. Maurice and Daphne have several ongoing projects, one of which is a delightful willow house, a lovely secret place where, maybe, should they ever retire, they will be able to sit and contemplate.

Tea and cakes had been arranged in the new tearoom, which also has a lovely courtyard filled with interesting plants, and it was such a pleasure to sit and chat. Two lovely daughters helped with the teas and then were pressed into taking the group photograph in the heather garden. We felt like stars as repeated photo-calls were demanded.

Just before we left, Daphne announced that there was a gift for everybody: *Erica x griffithsii* 'Jacqueline', a truly lovely souvenir.

With everyone clutching their precious plant, it was time to board the bus. We were all most grateful to Daphne and Maurice for showing us the fruits of their labours, and for the kindness and attention that had been showered on us all afternoon.

Back to the hotel. Our friendly coach driver pointed out the sights of Hereford and Worcester with many anecdotes of local life. Another chance to see the cannon ball, but the lights were green and we sailed passed too quickly. Another dinner with everyone enjoying excellent food and good company. Upstairs again, ready for the AGM. Arnold conducted us through all of the business. He told us of the resignation of Ron Cleevly as Honorary Secretary, and was able to say that Jean Julian would take his place. Tony Princep gave an excellent account of the state of our finances and accepted the position of Honorary Treasurer. This was a big step for him as he says he knows nothing about heathers – but it became obvious he was willing to learn.

The venue for the 2002 Conference – Gathering – was announced. This will be in the northeast of England, at a slightly earlier date, 30 August to 2 September, and the base will be the Washington Golf and Country Club,

Tyne and Wear. Roy Nichols gave us a brief description of the pleasures that await us for next year.

There was considerable discussion about the timing and format of future conferences or gatherings, one suggestion being that they should be held at 18-month intervals, in Spring one year and in the Autumn of the next. This was debated with mixed enthusiasm, but it was well recognised that falling numbers do necessitate some rethink of our annual conference.

With the business concluded, it was time for Charles Nelson briefly to whet our appetites for the heathers of The Azores. He showed us beautiful photographs of *Erica scoparia* and *Daboecia azorica*. Most of us then adjourned to the bar where we mingled with guests from a wedding reception that was also taking place at the hotel. A chance to relax and catch up on a year's happenings.

Sunday dawned, promising another lovely day. Our day started with a talk by Dr John Griffiths about his work on hybridising heathers. The title being "An update on hardy heather hybrids", John gave us a brief history of heather hybridisation. All this is a hobby for John, but obviously requires a dedication that he wished to share with us and he encouraged us all to have a go ourselves. He showed how he gathers and transfers the pollen. It all looked so simple.

Another quick cup of coffee and then we were away for our second guided tour through the countryside of Herefordshire. Travelling on a coach is a marvellous way of seeing into other peoples' gardens and certainly the folk of Hereford seem to tend theirs lovingly. Our driver managed to squeeze the coach through the narrow entrance of Hartlebury Common, where David Scott was waiting for us. Recalling the photographs which he had shown us on Friday night, we set off for a tramp across the Common. Our first view was of masses of *Calluna*, still in flower. David showed us some bushes acting as hosts to red spider mite. Is this a protected species, I wondered? I'm sure that I'm not the only person in The Heather Society who spends a lot of time trying to eradicate it. Much of the *Calluna* was a low-growing type and it was explained that the genes have altered to accommodate the requirements of the local habitat. Hartlebury Common is not a flat common, but an extremely hilly one. So we traversed up hill and down dale eventually arriving at the piece of wet land, where we found some plants of *Erica tetralix*. It had been a fairly dry summer so they had finished flowering.

The only trouble with going down to the wet land was that we had to come back up the hill to the coach, if we ever wanted to continue our travels. For one or two of us this was akin to climbing the North Face of the Eiger, yet everybody managed it in the end. The exercise had given us a healthy appetite

and most couldn't wait to eat their packed lunches and were soon attacking them on the coach.

A short ride followed to Whit Leng Gardens, which is a showcase for "Creative Landscapes", an enterprise belonging to Keith and Franchesca Southall, who offer a design service for gardens. Their beautiful three-acre garden is full of mature shrubs, perennials and heathers. Again, like The Bannut, the garden has been arranged into a series of rooms which lead into each other in a delightful manner. There were plenty of bubbling water features, and even a wonderful feature composed of an old bicycle! The camomile lawn was an experience in itself, giving off such a heady mixture when walked on. Members were able to wander through at their own pace, admiring the clever planting combinations. One member even enjoyed a quiet snooze on the grass in a lovely sunny spot. After our stroll around the garden, there was a welcome cup of tea and the chance to buy plants from the nursery.

A small and non-scientific survey was conducted into people's feelings and reactions to the previous days' activities. The overwhelming response to the question "What has been the best part of the Conference?" was "the shared feeling of friendship", followed very closely by the visit to The Bannut and the gift of 'Jacqueline'. John Griffith's talk was also much appreciated. But each time a person was asked "What was good for you?", the answer came back, "Meeting the other members of The Heather Society". So for those of you who have never attended before, we urge you to come and join us at the end of August 2002 and experience the wonderful camaraderie that exists amongst members. You are also able to discuss heather "problems", and get new ideas for planting. Everyone is made welcome – novice or expert.

Back to the hotel, where another wedding reception was in full swing, we were able to comment on the various dresses and headgear! Our weekend was rounded off with the second Open Forum, when members enjoyed a few more slides and a discussion on various aspects of heather cultivation. Finally the Chairman, Arnold Stow, closed the Conference and expressed the hope that the members had enjoyed the weekend. He looked forward to seeing us all again in 2002 in Washington, Tyne and Wear. Phil and his gallant band of organisers must take all the credit for such a wonderful conference.

It is always sad to say goodbye, but we all had to return to our various parts of the globe. Little did we know what momentous events were to take place the day after we left Hereford. Our thoughts and prayers go to the American peoples and especially to all of the members of the American heather societies. The North American Heather Society held its conference in Providence, Rhode Island, the following weekend with very reduced numbers.

BOOK REVIEWS & RECENT PUBLICATIONS

NELSON, E. C. 2001. *Wild plants of Connemara and West Mayo*. Dublin: Strawberry Tree. Pp 128; colour photographs. ISBN 1-904004-00-8.

NELSON, E. C. 2001. *Wild plants of south-western Ireland – Kerry, West Cork and Limerick*. Dublin: Strawberry Tree. Pp 128; colour photographs. ISBN 1-904004-01-6. UK£10, €16 (IE£12.50) each. (Available from The Heather Society, or direct from Strawberry Tree, 18 Woodbine Drive, Dublin 5.)

Two new souvenir pocket guides to the wild plants of Ireland appeared this year – *Wild plants of Connemara and West Mayo* and *Wild plants of south-western Ireland*. Their author is Dr Charles Nelson who published a similar guide called *Wild plants of The Burren and the Aran Islands* in 1999.

These beautifully illustrated books will appeal to nature lovers walking or rambling through those lovely counties and indeed are likely to stir the curiosity of readers and stimulate many a visit to western Ireland.

Charles Nelson's special interest in heathers comes out, particularly in *Wild plants of Connemara and West Mayo*. Those heather enthusiasts who were so fortunate as to participate in the Society's field trip to Connemara in 1995 will find some of the photographs and text evocative of the exciting trips led by Charles Nelson and David Small through dramatically beautiful, lush and – that year – sunny peat-lands.

Connemara is renowned for its range of heather species. Besides the three characteristic heathers of north Europe, the region is home to *Daboecia cantabrica*, *Erica erigena*, *E. mackaiana*, and the hybrid *E. x stuartii*.^{*} Dr Nelson also mentions a rare stand of *E. ciliaris* and, unsurprisingly, does not give its exact location.

South western Ireland makes up for its lack of exotic heathers with Ericaceous species such as bilberry (*Vaccinium myrtillus*), prickly heath (*Gaultheria mucronata*) – a garden escape – and the famed strawberry tree (*Arbutus unedo*).

More generally, the lists of plants described in the two books are not exhaustive, but readers may safely rely on the selections made by the author.

Dr Nelson is recognised internationally as an authority on the wild and garden plants of Ireland. He is widely travelled as a botanist and in particular has a long connection with the flora of Ireland. His intimate, expert knowledge of the wild plants of western Ireland is manifest in these publications.

The souvenir guides are truly intended for use in the field and so are conveniently sized and have tough transparent plastic covers instead of dust jackets. The contents are organised for easy reference and basically according to the colour of flowers. Purple-flowered plants are on purple pages, white ones on white pages etc., and one plant per page.

^{*} Allen Hall contributed excellent close-up photographs of the ovaries of *Erica tetralix*, *E. mackaiana* and *E. x stuartii* for *Wild plants of Connemara and West Mayo*. I am pleased, here, to acknowledge again his collaboration to this book. ECN.

Plant descriptions are clear and facilitate quick and easy assimilation of essential details. These include English, Latin and Irish names of the plant, month of flowering, description of flower and leaf with measurements and locations where they may be seen. Each plant description is complemented with a colour photograph taken on-site. Generally, the photographs consist of close-up pictures of the plants with little or no backgrounds. But sometimes a view of the setting is also given. For example, a photograph of a long magenta spike of purple loosestrife is set against a moody view of Lough Corrib with distant storm clouds gathering over the water. These together with some general views of mountains and loughs add to the appeal of the books.

I end this review where the books begin, by mentioning the Introductions. These speak invitingly of localities, and describe the habitats, and climate which make possible the rich flora of western Ireland. Some wise advice is given on what walks and climbs are safe.

A. Hall

GOLDBLATT, P. & MANNING, J., 2000. *Wildflowers of the fairest cape*. Red Roof Design in association with the National Botanic Institute, Cape Town. Pp 315: 663 colour illustrations. Price US\$34.95 (available from Timber Press in UK and USA). ISBN 0-620-24787-8

GOLDBLATT, P. & MANNING, J., 2000. *Cape plants. A conspectus of the Cape flora of South Africa. (Strelitzia 9.)* National Botanic Institute, Cape Town, and Missouri Botanical Garden, St Louis. Pp743: illustrated. Price US\$ 55.00. ISBN 0-620-26236-2.

The first of these volumes is a splendid book illustrated with hundreds of colour photographs showing the glories of the flora of the south-western extremity of South Africa, from the Cape of Good Hope eastwards to Swellendam and northwards to Nieuwoudtville. There are many familiar plants – *Amaryllis belladonna*, *Melianthus major*, etcetera – and many that are simply of stunning beauty. The photographs are of a consistently high standard – the one of a host of *Brunsvigia bosmaniae* receding into the distance is breath-taking. Eighteen Cape species of *Erica* are represented.

The photographs represent almost 650 species and fill the front two-thirds of the book. The rest of the book comprises brief descriptive texts for each plant.

This is an excellent book, to be recommended to anyone who is intending to visit the Western Cape. There is a map showing six areas that the authors consider to be the best ones for wild flowers: they advise that each demands at least a day to explore. It may also be recommended to everyone with an interest in the flowers of the Cape region, some of which are familiar as garden plants, but most of which can only be appreciated in the wild.

The second volume, *Cape plants: a conspectus ...*, by the same authors but with numerous other contributors (listed on p. [3]) including E. G. H. Oliver and I. M. Oliver who, needless to say, were responsible for the Ericaceae, is much more technical. It is essentially a descriptive listing of all species known to occur in the Cape Region. The roster of *Erica* – now the only genus of the Ericaceae recognized in the region – ranges over pp 423–452, and includes about 660 species, of which almost 97% (635 species)

are endemic (i.e. found only in the Cape Region, and nowhere else in the world). *Erica* is by far the largest genus – the next two are *Aspalathus* with 272 species, and *Pelargonium* with 148 species. Thus *Erica* species account for more than 7% of the total flora of the Cape Region.

This *Conspectus* includes about 9000 species – 69% of these are endemic, an extraordinarily rich flora. Each species is described very succinctly, the descriptions including months of flowering, habitats and distribution. When a family comprises more than one genus, keys are provided to genera. There is an extensive bibliography and an index to the genera.

Cape plants: a conspectus ... is a work for botanists rather than gardeners. It is the most up-to-date listing of the flora of the region and as such it is certainly an essential volume for every botanical institute with links, no matter how tenuous, with that region. Its importance as a source of information about the flora of the Cape Region *cannot* be over-stated.

And, as a pair, these two books form a veritable encyclopaedia, although the volumes do stand alone. Botanical libraries should have both volumes. Heather enthusiasts will be content with *Wildflowers of the fairest cape* by itself, unless they have an overwhelming passion for Cape species.

E. C. Nelson

RECENT PUBLICATIONS

ANONYMOUS, 2000. Cape Ericas. *Consumer house & garden* no. 57 (May): 28–29.

A New Zealand publication; the article deals with growing Cape ericas and illustrates a few cultivars.

ANONYMOUS, 2001. Airbase to green space. *English Nature magazine* no. 53 (January): 9.

Restoration of Greenham Common (a former US airbase in southern England: “As well as heather [*Calluna vulgaris*: pictured] there are seven species of orchid, dwarf gorse and dense silky bent ...”.

ANONYMOUS, 2001. Habitat restoration: The return of the native Dorset heath. *English Nature magazine* no. 54 (March): 6–7.

Restoration of heathland, “immortalised in classics”, Hardy’s Egdon Heath: “Dorset heath still account for some 11 per cent of the remaining lowland heathland in Western Europe.

ANONYMOUS, 2001. Habitat restoration: The Upland challenge. *English Nature magazine* no. 55 (May): 6–7.

Restoration recommendations: heather on Skiddaw, Cumbria, illustrated.

BANNISTER, P. & POLWART, A., 2001. The frost resistance of ericoid heath plants in the British Isles in relation to their biogeography. *Journal of biogeography* 28: 589–596.

CARNELLI, A. L., MADELLA, M. & THEURILLAT, J.-P., 2001. Biogenic silica production in selected alpine plant species and plant communities. *Annals of botany* 87: 425–435.

Calluna vulgaris among the species studied.

COOK, D., 2001. A palette of heather. *Garden, deck & landscape* 5 (3, Fall): 42–47, 100. (A *Better homes & gardens* special interest publication)

Gives non-heather growers an introduction to the value of using heaths and heathers in the landscape. Concise treatment of the world of heathers includes a representative sample of cultivars presented in chart form to highlight their individual characteristics, suggestions for landscape use, cultural requirements, and a liberal sprinkling of color photographs. An excellent introduction to heather growing, including a strong emphasis on foliage color. Mentions Karla Lortz's nursery in Washington State, USA.
[E. M. Wulff]

COVENEY, S. & O'DONOVAN, G., 2001. The potential of LANDSAT Thematic Mapper satellite imagery as a tool for assessing degradation of blanket bog and wet heath. *Tearmann: Irish journal of agri-environmental research* 1: 65–77.

Survey of County Mayo, Owenduff/Nephin Special Areas for Conservation.

DURBIN, B., 2001. Chefs-turned-brewers put beer on their plates. *The Oregonian* March 2001: FD1 & FD.

About the Spring Beer & Wine Festival held in Portland, Oregon. Mentions heather flowers (appear to be *Erica carnea* in photo with article) as an ingredient in a salad created by chef Keith Erickson of the DoubleTree Hotel, Lloyd Center. Dressing for the salad was a heather ale vinaigrette, and the salad was served with the ale.
[E. M. Wulff]

DUNFORD, B. & FEEHAN, J., 2001. Agricultural practices and natural heritage: a case study of the Burren Uplands, Co. Clare. *Tearmann: Irish journal of agri-environmental research* 1: 19–34.

Calluna vulgaris present in heath-type vegetation: mentioned *inter alia*.

GALE, R. & CUTLER, D., 2000. *Plants in archaeology. Identification manual of artifacts of plant origin from Europe and the Mediterranean*. ISBN 1-84103-00203. Otley & Kew: Westbury Publ. & Royal Botanic Gardens, Kew.

Massive tome with microphotographs of sections of wood; *Calluna vulgaris*, *Erica arborea*, *E. cinerea* and *E. tetralix*. Records an Iron Age basket made from heather shoots from Orkney, and a 5th millennium BC pit prop made from a stump of *Erica arborea* found in a Spanish mining complex.

HALL, C., 2001. Turning up the heaths. *Horticulture* December: 49, 75.

Mentions Karla Lortz's nursery in Washington State, USA.

HARVEY, G., 2001. Don't mention the war. *The National Trust magazine* no. 94 (Autumn): 44–48.

Heathland, "the creation of man in his environment": Dunwich Heath, Suffolk.

LOUGHREY, J., 2001. Homes and gardens of the Northwest. *The Oregonian*, 1 February 2001.

Mentions Karla Lortz's nursery in Washington State, USA.

LOVEJOY, A., 2001. Northwest Gardens. *Seattle Post-Intelligencer* 26 April.

Mentions Karla Lortz's nursery in Washington State, USA.

NAPREENKO, M. G., 2001. On the distribution of *Erica tetralix* (Ericaceae) in the Kaliningrad region (European Russia). *Botanicheskii zhurnal* 86: 150–153.

Distribution of cross-leaved heath, in Russian.

NELSON, E. C., 2001 ("2000"). *A heritage of beauty. The garden plants of Ireland. An illustrated encyclopaedia.* Dublin: Irish Garden Plant Society. Pp xx, 348; illustrated in colour and monochrome. ISBN 0-9515890-1-6. Price € 41 (€ 50 packing and postage included), UK£ 33 (may be obtained from IGPS, c/o National Botanic Gardens, Glasnevin, Dublin 9: add £5 for postage & packing).

A comprehensive listing, with descriptions and histories, of gardens plants that originated in Ireland, or which have explicit Irish connections ranging from the Irish yew, *Taxus baccata* 'Fastigiata', to (for example) *Erica tetralix* 'Curled Roundstone'. More than 3500 cultivars are given detailed entries, and a further 2000 plants are listed by name only; around 200 plants are illustrated. *Calluna*, *Daboecia*, and *Erica* are represented, of course, and some of the heather cultivars are illustrated. For reviews see e.g. *Curtis's botanical magazine* 18 (4) (November 2001), *Plant heritage* 8 (1) (Spring 2001).

O'DONOVAN, G., 2001. Productivity, grazing pressure and phenology of a limestone grassland in the Burren National Park, Co. Clare. *Tearmann: Irish journal of agri-environmental research* 1: 35–54.

Calluna vulgaris mentioned *inter alia*; note on its flowering period in The Burren, and interesting data of the predominant flower-colour in grassland during the year.

OLIVER, E. G. H. & OLIVER, I. M., 2000. Three new species of *Erica* (Ericaceae) from Western Cape, South Africa. *Bothalia* 30: 147–153.

Describes *E. rusticula*, *E. humidicola* and *E. rimarum*.

OLIVER, E. G. H. & OLIVER, I. M., 2001. Four new species of *Erica* (Ericaceae) from Western Cape, South Africa. *Bothalia* 31: 1–8.

Describes *E. richardii*, *E. anemodes*, *E. limnophila* and *E. viminalis* (unfortunately, an invalid name that will have to be replaced).

OLIVER, E. G. H. & OLIVER, I. M., 2001. Five new species of *Erica* (Ericaceae) from Swartberg Range, Western Cape, South Africa and a note on *E. esterhuyseniae*. *Bothalia* 31: 155–165.

Describes *E. dolfiana* (after Dolf Schumann), *E. taylorii*, *E. chionodes*, *E. oreotragus* (syn. *E. esterhuyseniae* Compton var. *trimera* Compton) and *E. blaerioides* and discusses the correct identity of *E. esterhuyseniae*.

ROURKE, J., 2000. A passion for proteas. The botanical art of Louise Guthrie. *Veld & flora* 87 (3): 120–123.

Biography of Isobel Louise Sophie Guthrie (1879–1966), who described several species of Cape *Erica* species. Her father, Professor Frank Guthrie, was Harry Bolus' collaborator on the account of *Erica* published in *Flora Capensis*.

SMALL, D. & SMALL, A., 2001. *Handy guide to heathers.* 3rd edition. Creeping St. Mary: The Heather Society Pp 178: colour illustrations. ISBN 0-9539079-6-1. Price £12.05 (p&p included). Available from The Heather Society.

This hardly needs any comment – indispensable!

SPIELBERG, S., 2001. Dig it. *The National Trust magazine* no. 93 (Summer): 34–37.

Report on National Trust's own peat-free compost; "Ericaceous shrubs – particularly rare varieties of rhododendrons – were disappointing in the peat-free mix, and no better in reduced-peat blend ...".

Supplement to *International register of heather names* – I (2002)

Registered cultivars

Jean Julian — *Erica x williamsii* 'Jean Julian'

Registered on 1 November 2001 by David Small. Registration no. 167

- * Flowers H8, single, July–October; foliage mid-green tipped yellow for most of the summer; compact, semi-prostrate, to 10cm tall in 2 years.
- ♥ Wild-collected; twelfth clone; found by Jean Julian on 9 September 1999 at Kynance Cove, The Lizard, Cornwall. The surrounding vegetation was low grass with *E. tetralix*. There was little *E. vagans*.
- 📖 Published here.
- ① Named after the finder, currently Honorary Secretary of The Heather Society.

Joan Graham — *Erica vagans* 'Joan Graham'

Registered on 1 February 2001 by Mr M. Nicholson. Registration no. 165

- * Flowers white to lilac (H4) with red/crimson petal edges turning brown; with green foliage. Upright, large, self-branching.
- ♥ Chance seedling; raised by M. Nicholson; found in a tray of seedlings set from capsules from 'Mrs D. F. Maxwell'; the other parent was possibly 'Lyonesse'. Outgrew the other 50 seedlings and was covered in flowers; bloomed for first time in September 2000.
- 📖 Published here.
- ① Named after Mrs Nicholson (her maiden name).

Lila Fee — *Erica cinerea* 'Lila Fee'

Registered on 14 December 2001 by Kurt Kramer. Registration no. 168

- * Flowers lilac: July–August; with dark green foliage. Habit compact, upright.
- ♥ Seedling; selection from a sequence of seedlings from a deliberate cross by Kurt Kramer (Edeweicht, Germany).
- 📖 *Der Heidegarten* 50: Heidelexikon (2001).
- ▲ *Der Heidegarten* 50: Heidelexikon (2001).

Neptune — *Erica cinerea* 'Neptune'

Registered on 27 October 2001 by Edith M. Davies. Registration no. 166

- * Flowers cerise (bright pink-red), in upright, cylindrical spikes to 4ins long, with green foliage. Habit 24ins x 24ins.
- ♥ Seedling; growing within 200ft of the Pacific Ocean on Neptune Avenue, Fort Bragg, California; first observed in October 1996.
- 📖 Published here.
- ① Named after the place where it was found.

Roter Kobold — *Erica cinerea* 'Roter Kobold'

Registered on 14 December 2001 by Kurt Kramer. Registration no. 169

- * Flowers pink-red: July–August; with dark green foliage. Habit upright.
- ♥ Seedling; selection from a sequence of seedlings from a deliberate cross by Kurt Kramer (Edeweicht, Germany).
- 📖 *Der Heidegarten* 50: Heidelexikon (2001).
- ▲ *Der Heidegarten* 50: Heidelexikon (2001).

Spanish Lime — *Erica arborea* 'Spanish Lime'

Registered on 18 February 2000 by D. C. McClintock. Registration no. 164

- * Yellow-green (RHS 145A) foliage; height 2 metres after 15 years.
- ♥ Wild-collected foliage-colour sport on *E. arborea*; found by E. C. Nelson, D. J. Small and D. McClintock, 26 July 1982, at Puerto de Piedras Luengas (Alto de Campoo), Palencia, Spain. Propagated by D. J. Small (nursery code: DHN 27/82). Introduced commercially by William Dyson, Great Comp, c. 2000.
- 📖 Published here.
- ① Alluding to country of origin and the foliage colour.

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**All material for the 2003 issue of the *Yearbook of The Heather Society*
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Articles may be submitted by e-mail.

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Handy guide to heathers (3rd ed) (2001): 15 December 2001

YEARBOOK OF THE HEATHER SOCIETY

2002

CONTENTS

In memoriam David McClintock (1913–2001)

Tribute by E. C. Nelson and D. J. Small	1
Tribute by Pamela Lee	5
Bibliography of David McClintock	8
Heathers associated with David McClintock	13
David McClintock: News of <i>Erica sicula</i> in Sicily	15

Ella May Wulff	The accidental heather garden	17
J. Prothero	Tubie test-ing in British Columbia	23
E G. H. Oliver & I. M. Oliver	A new rock-loving species of <i>Erica</i> from the eastern Swartberg, South Africa	31
Allen Hall	The hardiness of some of the less familiar heathers in the English Midlands	37
P. Medagli & Livio Ruggiero	Wild heathers of Apulia (Southern Italy)	43
M. Pardo de Santayana, L. Ramón-Laca & R. Morales	Traditional uses for heathers in Spain	47
Obituaries	Thomas Albert Julian (1908–2001): Peter Newton	57
	Dolf Schumann (1918–2001): E. G. H. Oliver	61

THE HEATHER SOCIETY'S PROCEEDINGS 2001

30th Annual Conference	63
BOOK REVIEWS & RECENT PUBLICATIONS	69
International register of heather names. Supplement I	74

NEW SPECIES NAMED IN THIS ISSUE
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